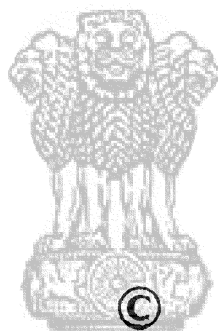


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**REPORT OF THE SCAVENGING
CONDITIONS ENQUIRY COMMITTEE**



सत्यमेव जयते

INDIA HOME AFFAIRS (MINISTRY OF—)
SCAVENGING CONDITIONS ENQUIRY COMMITTEE (1960)

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FOREWORD

At the instance of the Minister for Home Affairs, the Central Advisory Board for Harijan Welfare, at its meeting of 12th October, 1957 set up a Committee consisting of Shri N. R. Malkani as Chairman, and Sarvashri K. L. Balmiki, R. K. Bose, N. S. Kajrolkar, and P. N. Rajabhoj as Members to prepare a scheme to put an end to the degrading practice of scavengers having to carry night-soil in buckets or baskets. The Committee started work in January 1958 and submitted its Report in December, 1960.

2. The Government of India wish to place on record their appreciation of the thorough manner in which the Committee has performed its task. Its Report is informed by a genuine feeling for the scavenger's lot and contains concrete recommendations not merely for eliminating the practice of carrying night-soil as head loads, but also for removing filth and indignity from all stages of scavenging, and for improving the working and living conditions and social status of scavengers. Most of these recommendations fall in the field of action of Local Bodies who have their own financial and other difficulties. But it is hoped that the publication of this Report will arouse genuine public interest in the problem and lead to speedy and effective action. The Government of India have, on their part, already issued orders liberalising their assistance to Local Bodies for improving the working conditions of scavengers.

3. A Hindi translation of the Report will be published shortly, and financial assistance is being offered to the State Governments for having translations issued also in other Indian languages.

New Delhi,
July 12, 1961.

LAL BAHADUR

CHAPTER ONE

INTRODUCTION

Mechanisation has affected every field of human life throughout the world and India is not an exception to it. Machine has been replacing man in different professions but we have yet to see its application in the removal of night-soil right from the seats in the latrines to the dumping grounds. Even today, after thirteen years of freedom, it is a common sight to see a scavenger (mostly women) moving with a heavy load of night-soil on his head carried in a bamboo-basket or a leaking drum, the matter trickling over his face and body. Though he is seen everywhere in this state, the passerby invariably avoids his sight as he considers it inauspicious to meet with such a scene but gets reconciled to it as if it is inevitable. He perhaps does not trouble himself to arouse his conscience which is bound to tell him that such sights could be avoidable and the scavengers made not to carry any head loads of night-soil. If per chance, a scavenger comes in close proximity, he is showered upon with all sorts of filthy remarks and so often with abuses. No sooner, a scavenger with a head load or a night-soil cart comes into sight, men start pulling out their hand-kerchiefs, the ladies the 'palla' of their saris and cover their faces. Even the officers-in-charge of public health who are supposed to remain daily in close touch with the scavengers to supervise scavenging work and look after their welfare, for which they are paid, have been noticed drawing out their hand-kerchiefs and trying to remain as far away as they could, from the spots of filth—the spots where the scavenger is required to work for hours together day in and day out and for his whole life. At a night-soil pail depot in a cosmopolitan city, a good number of scavengers were seen wading through, bare-footed, in ankle-deep pool of night-soil diluted with water running from an over-head water hose. The pail depot had been clogged and there was no outlet and yet the truck loads of night-soil were being brought in and cleared there adding more to the misery of the scavengers at work. At a good number of places, night-soil is churned with the help of bamboos or with bare-feet before transportation or disposal through gutters. We clean our utensils and crockery with soap or Vim but the scavenger is supposed to clean the drums used for carrying night-soil with little or no water at all, with bare hands rubbing the drum from inside out and scratching the rims with finger tips. In many towns, scavengers are required to clean latrines only during the darkness of the night and supposed to finish their work before the day dawns. People do not like the sight of night-soil and do not approve of seeing a scavenger carrying night-soil in their presence. In many towns, latrines are so constructed that the users do not see their own night-soil. They simply squat over the seats and go away without even caring if their latrines are ever washed by the scavengers. They themselves would never like to give a bucket of water for the purpose. But the scavenger is a must for all these. He is considered inseparable from night-soil. Indian society does not appear to care for him but definitely he is a source of attraction to the foreigners who, with the influx of tourist traffic, come in great numbers to our motherland and do not fail to carry back a few snaps of a 'Bhangi' carrying head loads of night-soil as a souvenir of our culture.

2. In many other countries where such a problem existed, improved methods have been introduced but in India, night-soil is still removed in the

most primitive manner. People in Western countries do not carry weights as head loads even if they consist of valuables or eatables. They always carry loads on some sort of a vehicle failing which they lift them on their backs or shoulders but not on heads which enjoy a pride of place. But in India, the tradition has been for the scavenger to carry night-soil on head and if he is advised not to do so he comes out immediately protesting that as his ancestors had been doing that, he will continue to do it accordingly and so will his children and grand-children. The continuance of this practice of carrying head loads is due not because of society alone but because the scavenger has also been equally responsible. The doctor and the nurse also do dirty work and sometimes handle filth but yet their profession is one of the most dignified in society. Being so, why should not we strive to make the profession of scavenging at least as clean and dignified ?

3. Mahatma Gandhi had realised the situation early in the twenties of the century. He said—

‘I do not want to attain Moksha, I do not want to be reborn. But if I have to be reborn, I should be born an untouchable, so that I may share their sorrows, sufferings and the affronts levelled at them, in order that I may endeavour to free myself and them from that miserable condition. I therefore, pray that I should be born again, I should do so not as a Brahmin, Kashatriya, Vaishya or Shudra but as an Atishudra a Bhangi’.

One of the features of his Ashram life was scavenging work. No professional scavenger was to be employed in the Ashram and the Ashramites of all castes were themselves supposed to carry out the scavenging duties. Under the tender care and guidance of Mahatmaji, scavenging work became cleaner and dignity was added to the profession. The Ashramites used bamboo-poles to be carried by two persons at either ends with buckets full of night-soil hanging in between. The night-soil including urine was carried to adjacent fields and gardens and used as good organic manure.

4. The Government of Bombay and Uttar Pradesh had appointed Committees to look into the conditions of sweepers and scavengers but their activities were mainly confined to the major demands like increase in wages, supply of uniforms, facilities for education, reduction in working hours, allotment of municipal quarters etc. These Committees *inter alia* made certain observations for providing receptacles and introduction of hand-carts/wheel barrows but they did not go deep into the matter. The recommendations of the Scavenger's Living Conditions Enquiry Committee headed by Shri V. N. Barve, specifically related to the local bodies in the bilingual State of Bombay, but these were capable of wider application and could be adopted profitably in other States also. The Ministry of Health, accordingly, prepared a summary of recommendations and forwarded that to all States/ Union Administrations requesting them to implement as many recommendations of that Committee as possible (Appendix I). The Ministry of Home Affairs also took up the matter and emphasised the need for implementing the recommendations contained in the summary forwarded by Health Ministry and in paragraph 21 of Chapter 4 of Volume I of the Report of the Backward Classes Commission (Appendix II). As a first step to improve the conditions of work of the scavengers and to make the profession consistent with human dignity, the Home Ministry emphasized the need of supplying wheel barrows/hand carts to sweepers and scavengers employed in each municipality on scavenging work. To supplement the financial resources

of the local bodies, the Ministry of Home Affairs offered to contribute 50% of the cost towards the purchase of wheel barrows/hand carts through State Governments to such of the municipalities/local bodies who were prepared to contribute the remaining 50% cost with or without any assistance from the State Governments. The scheme has since further been liberalised and the State Governments advised to supply wheel barrows/hand carts to private scavengers also.

5. In the middle of 1958, Mrs. Violet Alva, Deputy Home Minister, happened to go on the inspection of housing schemes being implemented for welfare of Scheduled Castes under the Centrally Sponsored Programme. During the course of her visits, she happened to see a model of a trench-latrines in a private house in Allahabad. This type of latrine is not costly, does not require the services of a scavenger and quite suitable for rural areas. A blue print of the design of this latrine was forwarded to all the State Governments and Union Territory Administrations requesting them to adopt the same wherever feasible in colonies to be established for Scheduled Castes and Scheduled Tribes. (Appendix III).

6. The problem of carrying night-soil as head load has persistently been engaging the attention of the Home Minister, Shri G. B. Pant, who has been very anxious to see the inhuman practice abolished completely and immediately. He had emphasised the need for eradication of such a practice in his address at the Conference of Chief Ministers held in New Delhi on 3-4-1959. Again, he stressed the point at the Conference of State Ministers-in-charge of Welfare and Backward Classes in January 1960. The Estimates Committee in its 48th Report has recommended as follows :—

- (a) The Ministry of Home Affairs should take a more lively interest and should impress upon the State Municipalities and local bodies that it is of utmost urgency that the practice of carrying night-soil as head loads be eliminated within the shortest possible time.
- (b) Such municipalities and local bodies who, for various financial and other reasons, may not be able immediately to change over completely from the practice of carrying night-soil on head to that of removing it in hand carts or wheel barrows, but may be ready to introduce the scheme gradually, should be encouraged and allowed financial aid.

Success, however, in abolishing this practice depends on the efforts of the State Governments, Union Administrations and mostly on the scavenging community itself.

7. The subject came up for discussion in a meeting of the Central Advisory Board for Harijan Welfare held on the 12th October, 1957, under the chairmanship of Shri G. B. Pant, Home Minister. Shri Rajkrishna Bose, now a member of this Committee complained that in some municipalities night-soil is being carried in baskets or buckets as head loads which is a degrading practice. The Chairman, thereupon, desired the following persons to prepare a scheme for putting an end to the practice of carrying night-soil in baskets or buckets as head loads :—

- (1) Shri N. R. Malkani, M.P. (Rajya Sabha)
- (2) „ P. N. Rajabhoj, M.P. (Rajya Sabha)
- (3) „ K. L. Balmiki, M.P. (Lok Sabha)

- (4) „ Rajkrishna Bose, M.L.A. (Orissa)
- (5) „ N. S. Kajrolkar.
- (6) „ O. K. Moorthy, Officer on Special Duty,
Ministry of Home Affairs.
(Secretary and nominee of the Government of India
in the Committee).

In a meeting of the Members of the Committee, it was resolved to request Shri N. R. Malkani to act as Chairman.

8. The scope of the terms of reference of the Committee was very limited. It was, however, felt that the problem of carrying night-soil as head load cannot be dealt with separately from the general problem of (a) improvement of scavenging conditions, and (b) improvement of living conditions of scavengers. The Committee, therefore, took a broader view of its functions and studied the whole process of cleaning latrines, collecting and removing night-soil right from the seats in latrines to the pail depots and from there to dumping grounds and other places of disposal. The Committee also looked into other problems closely connected with the living conditions of scavengers such as housing and welfare amenities etc., for them and has made some observations in this regard in this report.

9. The best system for the disposal of night-soil through mechanised means is the flush-out latrine, but unfortunately introduction of this, however, throughout the country requires lot of funds and seems outside the scope of practicability in the foreseeable future. The question however, arises of providing alternative methods of disposal of night-soil which as an interim measure, comparatively involve not much outlay taking into consideration the magnitude of the problem. Such alternative methods could at the same time ensure the expeditious elimination of the practice of carrying head loads. Most of the municipalities do not have sufficient protected water supply even for drinking purposes. The question, therefore, of providing large quantities of water for flushing out night-soil does not seem to arise. Lot of funds are required for laying underground sewers and purchase of accessories for installing sewage disposal plants etc. The Ministry of Health, Government of India, have been giving some grants to States for water and sewage disposal schemes on the basis of certain programmes under the Second Five Year Plan but the amounts provided are very meagre compared to the demands from the local bodies which run into thousands and most of whom are extremely poor.

Bhubaneshwar and Chandigarh are the two new towns where sufficient care has been taken to lay underground sewers for flush-out latrines and also water is available, but even at these places, all the houses have not been connected with the sewers and still there are dry-latrines. As long as dry-latrines continue, the problem will exist and it is a story of the far distant future to think of all the towns having underground sewers. All the old cities are very crowded where latrines are dry and so constructed that perforce, the scavenger has to adopt unclean methods. In many of the old buildings latrines have been so constructed and located that it is difficult to have new sanitary latrines without demolishing the old ones and effecting radical structural alterations. Improvements in these buildings which are countless is a Herculean task. We have thus, no other go but to introduce improved methods of scavenging so as to make the profession as clean as possible for the time being.

The Committee has seen many types of latrines—cheap as well as costly, some needing sufficient water whereas others require only a little quantity of water and so on. The Committee has referred to the improvements to these latrines in the body of the report the introduction of which, if taken up, would by itself make the occupation cleaner.

10. The Committee for the first time met on 3rd January, 1958, and decided to draw up a questionnaire for eliciting factual position in regard to the problem. The questionnaire was finalised by the Committee in their meeting held on 28th March, 1958, and forwarded to all State Governments/Union Administrations, Members of both the Houses of Parliament, Members of State Legislatures and Councils and many of the non-official organisations and individuals interested in the problem (Appendix IV). 2,678 copies of the questionnaire in English and 320 copies in Hindi were distributed directly by the Ministry of Home Affairs. Some of the State Governments also got extra copies printed both in English as well as in their regional languages and distributed them to parties interested in giving their views. In response, 2,024 replies to the questionnaire have been received (Appendix V). Non-official organisations and individuals did not show much interest in it and in all only 24 replies have been received from them, the rest 2,000 being from municipalities and local bodies in State Governments/Union Administrations. However, the Committee received a number of representations and suggestions from the scavengers organisations and individuals demanding more pay, quarters, uniforms, better facilities for education etc., for the scavengers, but only a few of them gave suggestions for putting an end to the practice of carrying night-soil as head loads. The Ministry of External Affairs also requested our Missions abroad for collecting necessary information on the methods of scavenging adopted in various countries and replies have been received from 18 Missions abroad.

11. The response to the questionnaire in the beginning was very slow and it was felt that the Committee would have to wait indefinitely for the replies. Moreover, from the replies already received, it was observed that the replies were too formal and in fact many of them did not give the correct picture on which the conclusions could be based. The Committee, therefore, decided to visit a few important towns in different States for studying on the spot the methods of scavenging. The physical study of the problem revealed that its magnitude was much greater than as originally anticipated at the time of the formation of the Committee. The conditions of scavenging have been found somewhat different from place to place but in almost all places, were indescribably insanitary. The conditions at some of the places seen were so nauseating that a few of the members, inspite of having become accustomed to visiting the filthiest spots in the towns, had vomitings. A few of the towns in the country were so filthy that they could as well be called 'Big Latrines'. The visits of the Committee to the various towns proved very useful in the sense that enough public opinion was aroused for compelling the authorities as well as the citizens to think seriously about the problem and do something tangible for improvement of scavenging conditions.

12. As Members of the Committee decided to visit almost all the States in the country for making an on the spot study of the problem which due to prevailing conditions varied from State to State, it took some time in covering the entire country and submitting the Report. Moreover, as Members of the Committee were either Members of Parliament or State Legislature, they were able to devote time only during the inter-session

periods of the Parliament/State Legislature and at the last stage, they had to go out even during Parliament sessions. The tours of the Committee were rather strenuous. The Committee did not give more than a day to any town except the capitals of the State where Members used to discuss the situation with Ministers, non-officials and officials of the Departments concerned. On several occasions, the Committee covered two stations a day. Normally, the Committee gave 5 to 6 days to each State and visited an equal number of towns there.

The Committee visited the States of Andhra Pradesh, Bihar, Gujarat, Kerala, Madhya Pradesh, Madras, Maharashtra, Mysore, Orissa, Punjab, Rajasthan, Uttar Pradesh, West Bengal and the Union Territories of Delhi and Himachal Pradesh. The programme of the Committee in each town started with a morning visit of about 4 hours duration. In every place visited, the Committee saw the methods of scavenging employed by the private as well as municipal employees. The Committee went round the towns and saw the conditions of latrines both private and public, implements in use for removing night-soil, system of its carriage from latrines to carriage van, night-soil pail depots or dumping grounds, both private as well as public, sewage plants, and the sweepers colonies built either by the local authorities or privately. In the afternoon, meetings were arranged with officials-in-charge of Public Health, General Administrations, Commissioners, Town Planners, Engineers for Water Works and Sewage Boards etc. Such discussions with official representatives were mutually advantageous in as much as the members of the Committee appreciated the difficulties in the matter of introducing improvements in methods of scavenging. In Corporations, the members exchanged views with the Mayors, Deputy Mayors and Councilors. Immediately after the meetings with officials, meetings were arranged with the representatives of Non-official Organisations such as Bharat Sevak Samaj, Harijan Sevak Sangh, Bharat Dalit Sevak Sangh, All India Balmiki Sabha, Bharatiya Depressed Classes League, and such other social workers as were interested in the welfare of scavengers. After these meetings, the members addressed public meetings arranged by the scavengers, their unions or social workers in their respective localities. Such meetings in the Bastees proved very educative.

13. We are grateful to the hospitality and cooperation extended to us by the Officials, Non-Officials, Union Leaders, representatives of various Organisations and Social Workers etc., in different States we visited. We are particularly grateful to the Ministers, Deputy Ministers of the Departments concerned and the Mayors and Deputy Mayors of the Corporations who amongst their onerous duties, found time to give their valuable suggestions to the Committee and offered all possible help in the noble cause. Our thanks are due to the Ministry of External Affairs, who collected information on the conditions of scavenging in some of the foreign countries. We are indebted to the Harijan Sevak Sangh, Indore, and others who supplied some photographs and sketches etc., for use of the Committee.

14. The Members of the Committee are deeply indebted to the Chairman, Shri N. R. Malkani, for his able guidance and indefatigable energy in conducting the deliberations during the tours in the various States. We wish to record our appreciation for the expert help of Shri O. K. Moorthy, our Secretary and nominee of the Government of India on this Committee who, in addition to his numerous official duties as Officer on Special Duty in the Ministry of Home Affairs, was always willing to push forward the work and rendered very useful assistance in the deliberations of the Committee

and for drafting the report. We also place on record our appreciation of the devoted and sincere services rendered by Shri H. N. Nigam, Assistant, who not only managed the entire office work of the Committee single handed most efficiently but also deputed for the Secretary during a few tours.

N. R. MALKANI

Chairman

P. N. RAJABHOJ

(Member)

K. L. BALMIKI

(Member)

RAJKRISHNA BOSE

(Member)

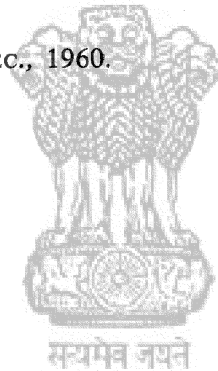
N. S. KAJROLKAR

(Member)

O. K. MOORTHY

(Secretary)

NEW DELHI, THE 26TH DEC., 1960.



CHAPTER TWO

CLEANING OF LATRINES

15. Cleaning of latrines is an important aspect of the problem. This is the first place where the scavenger comes in direct contact with night-soil and his hands are completely soiled. Removing of night-soil in a good or bad manner mostly depends on the construction of latrines. The better the construction, the cleaner are the methods of removal. The system as it exists today is most insanitary and in many cases quite primitive.

16. The description of different types of latrines in various States has been given in chapter nine wherefrom it would be observed that the most primitive type of latrines are those wherein the scavenger has to crawl through a narrow passage pushing the basket with one hand, resting his body weight on the other and make his way upto the latrine chamber and retreat the same way, or where he has to thrust his hand inside the chamber through a narrow opening, and in the latrine where the seat is much farther inside, he has to stretch his hand to the maximum and thrust his head inside the hole to see and do proper cleaning, or the latrines having anti-chambers wherein the scavenger has to stand bending forward due to shortage of space and carry out his duties. The very common type of latrine consists of two chambers upper and lower—the upper squatting chamber which the user enters for easing purposes from the interior of the house and the lower receptacle chamber which is accessible for removing the night-soil only from outside the house and the opening of which is normally by a back alley or on the street along-side the main entrance. The person using the upper chamber of the latrine, it appears, is not concerned with the insanitary and dirty condition of the lower chamber of the latrine or the receptacle if there is any, but it is the scavenger who has to worry about all these. He has since become indifferent to existing conditions and takes them for granted in a most routine manner.

The Receptacle

17. In about 80 to 90% of cases, latrines have no receptacles and human excreta drops directly on the ground, the flooring of which, with the passage of time, gets worn out and the cement plaster or the masonry work become patchy and most uneven. In most cases the side-walls or the steps are devoid of cement plaster with the result that in the absence of a receptacle, human excreta gets stuck up everywhere on the sidings and the floor. The scavenger while cleaning, has to scratch the floor and the side-walls to do maximum cleaning if he is a conscientious worker, or leaves it dirty, only taking away the substance that could be collected easily. In most towns, lower chambers are never washed and as such always remain most dirty and stinking. In many cases, latrines are not cleaned for days together and in some cases where unscientific pits have been dug, these are not cleaned for several months and when these become clogged up, the entire locality stinks.

In latrines with receptacles, generally the lower chamber is too wide and not related to the size of the receptacle which leaves much scope for its lateral movement on all four-sides resulting in the night-soil dropping out of the receptacle and soiling the flooring and the side-walls and thus making the process of cleaning all the more difficult. In such latrines, the scavenger has to clean not only the receptacles but also the entire latrine in which process again he gets more dirty. The receptacles are not standardized. The State Governments have not thought over this problem and people use all sorts of improvised containers upon which they can lay their hands. It may be bamboo baskets of any shape or size, kerosine-tins, earthen gamlas of various sizes in some cases weighing as much as 15 to 20 seers each; drums, discarded wooden packing cases, old trunks, broken earthen wares, discarded tubs, leaking buckets and so on. The few municipalities who ever gave this problem a little thought, introduced buckets in public latrines and this practice has been followed in some private houses also. In Sabarmati Ashram, two buckets were kept—one under the seat for night-soil and the other for urine and ablution water. This practice has been followed in some of the public latrines by the Jabalpur Cantt. At a few places, they use receptacles made of iron sheets or M.S. Plates, rectangular in shape with handles on either side. In Kharagpur (West Bengal) the Committee saw a receptacle with a perforated plate over it allowing water and urine etc., to flow into the receptacle, leaving behind solid night-soil on the plate (Fig. 6). In such a receptacle also, the night-soil which gets liquified with the falling of water etc., also seeps down into the receptacle but still the major portion remains on the perforating plate. It however, requires a proper cleaning as otherwise the human excreta may remain stuck up in the holes. Receptacles of drum shape are quite common in jails and in some public latrines. In some bungalows, the commode used is no better than an ordinary receptacle.

Due to varying designs and awkward shapes of the receptacles, the scavenger handles them in the manner he feels convenient and in doing so he cannot avoid bodily touch with night-soil. His hands and feet get contaminated particularly when the contents of the receptacle are poured into the bigger basket or drum for carrying it to the pail depot or carriage vehicle.

In the circumstances, introduction of a receptacle of a standard size and make becomes imperative. No particular pattern of the receptacle can, however, be laid down for the country as a whole as the designs and structures of latrines differ from State to State and from town to town within a State. The receptacle should therefore, be in conformity with the type of latrines common in a particular town and for prescribing standard receptacles, the local authorities are in the best position.

The Committee recommends that the use of receptacles in all private and public latrines should be made compulsory. The receptacle should be of iron sheets or M.S. plates of suitable gauge to last at least a year or so and should be provided

**Standardi-
sation of
Receptacles**

with a handle on one side and a slanting side on the other. The non-use of receptacles in latrines should be made an offence and the defaulters dealt with properly. Bye-laws should be so framed as to penalise the use of a receptacle other than the prescribed size and make. It is felt that the house owners left to themselves would not go in for the receptacles even though it is made obligatory and penalty imposed for failure to provide the receptacle. The committee therefore suggests that the receptacle should be supplied periodically, at least once a year, or more if the first is broken or damaged, by the local body directly or through licensed shops at a no-loss-no-profit basis and if necessary at subsidised rates. It should be the duty of the scavenger and the area sanitary inspector to report to the local body about a receptacle which might have been broken or damaged. The local body should recover the cost along with the scavenging tax where such a tax is in force or with other taxes at the time of their realisation. The floor of latrines is often 'Kutchra'. It should be cemented and slanting outward. The receptacle chamber should not be too wide to allow lateral or forward movement of the receptacle. It should be placed in a fixed spot so as to ensure that the aperture in the squatting plate is just over the centre of the receptacle. Fixed place can be ensured by making a slight depression of the size of the receptacle in the floor with smooth slanting sidings so that the receptacle may get fitted into the cavity and water if any accumulated can be wiped out conveniently. The depression should not be deeper than half an inch.

The sketches of a few better receptacles seen by the Committee in use are shown in figures 4, 5 and 6 which may serve as a guide to the local bodies.

The above recommendation will hold good also in case of latrines where there are no receptacles. It should be obligatory to keep a standard receptacle in such latrines and these should be constructed properly. The receptacles should be provided in public latrines also for which the responsibility is that of the local bodies.

The receptacles in public latrines, private latrines of big chawls, katras or houses having large number of people are always found full and overflowing. In such places it should be ensured that receptacles of bigger size so as to cater to the needs of the place are provided.

The number of such public latrines should conform to the demand for them in the area on the basis of their usage. It is desirable to prescribe a standard proportion to the population of the area and conform to it.

The structure of latrines where no receptacle can be placed at present should be got changed so as to make provision for a receptacle. This would not be costly and would not require much change.

**All Public
Latrines to
be Water-
borne**

As far as possible, all public buildings like offices, schools, hospitals etc., should have flush-out latrines failing which septic tank latrines or aqua-privies be provided. But where this is not possible, it should be ensured that standardized receptacles are provided. Hotel owners and owners of places where large number of people stay should also follow this practice.

It is a pity that even where new colonies or townships are being set up either by Government or with Government aid, care is not taken to see that the latrines attached to the residential buildings are of the sanitary type. The Committee recommends that wherever new buildings, colonies or townships are built by government or with government aid or by local bodies, and in all industrial housing programmes the latrines must be of sanitary types.

**Night-soil
and-Urine
or Ablution
Water to
remain
separate**

18. In majority of service latrines, there are no arrangements for keeping the night-soil, urine or ablution water separate. These get mixed up and add to the difficulty of removal (figs. 7 & 8).

It would be much better if latrines are so modified as to ensure keeping night-soil and urine or ablution water separate. This can be done by having a slope in front of the seat so that urine is not mixed with night-soil. We further advise that an additional step may be provided side by side so that the squatter shifts to the third step for purposes of washing.

The Scraper

19. The supply of a scraper for cleansing the contents of a receptacle is absolutely essential. Throughout the country, not a single municipality has ever thought seriously of providing a proper scraper to the scavenger. As at present, the scavenger scrapes night-soil usually with the help of a little tin-piece, a piece of broken earthen-ware, a little broom measuring about 6" to 9" or so in length, or with bare hands. Some municipalities have supplied crude types of scrapers which are no good. One municipality supplied rubber soles (used for shoes) to its employees for scraping night-soil. Another municipality has supplied enamelled quarter-plates for the purpose. Unless a proper scraper is introduced, the system of removing night-soil cannot be improved. Some of the municipalities do not supply implements to their scavengers and instead, they give some allowance to their employees annually. In such places, scavengers practically do not spend the amount on keeping proper implements but treat it as their pay and spend it in the manner they choose. Private scavengers have no doubt to make their own arrangements but as it involves spending some amount, they avoid doing so and hence they use tin-pieces etc. Therefore *It should be obligatory to use a standardised scraper which should be supplied by the local body and not left to the scavengers themselves.*

This would be easy in case of municipal employees but in case of private scavengers *the local body should supply the standardized scraper directly or through licensed dealers on no-profit-no-loss basis and it should be made obligatory to use such a scraper.*

The scraper should be of iron sheet or M.S. plates with a long handle at one end and a semi-curve at the other end. The sheet or plate should be of a suitable gauge so that it may not break while collecting the night-soil. The corners of the plate should be rounded. It should be the duty of the scavenger and the area sanitary inspector to ensure that broken or damaged scrapers are replaced immediately.

The designs of some of the scrapers in use are shown in figures 9 to 13.

20. The scavengers engaged in the removal of night-soil should be supplied with rubber gloves by the municipalities. **The Rubber Gloves**
Efforts should be made to encourage the use of rubber gloves, particularly at the pail depots and dumping grounds.

21. After collection from the latrine-seats, night-soil is emptied mostly in a big basket, 'tasla' or drum etc., which is then carried on head to the night-soil cart, lorry or pail depot, or in some cases straight to the dumping ground (figs. 14-17). **The Head Load**
The 'tasla' and the drum get worn out very soon and start leaking. These have no lids or covers. But the bamboo-basket is most commonly used for carrying head loads. The scavengers put leaves, grass, paper or sprinkle ash on the baskets or plaster them with cowdung to prevent leakage but these are all insanitary methods and should be stopped. Majority of the scavengers do not make the baskets leak-proof. When such baskets are carried on head, or on waist as in Orissa, they leak trickling night-soil over the body of the carrier. This heinous practice has to be put an end to by all possible means. The Committee recommends that *carrying of night-soil in basket, 'tasla' and drum etc., as head loads should be prohibited by law and made an offence. Persuasive methods should also be adopted and they can be more effective than legislation.*

22. The best system for carrying night-soil from the latrine to the cart or trailer could only be through a mechanical device such as a wheel barrow and not on the head or shoulders or waist of a human being. **The Bucket**
This is the only way of avoiding direct contact by the individual with night-soil in the actual process of removal. In many cases, wheel barrows can be taken right up to the latrines but in old towns many of the lanes are so narrow or unpaved or have ups and downs that wheel barrows cannot ply therein easily. In such cases, the scavenger has to take out the night-soil from the latrine, empty it into a big basket and then carry it to the cart or motor van and while doing so, he carries night-soil as a head load. To avoid the head load and keeping in view the various existing difficulties, the Committee feels that there is no alternative but introduce buckets only in such cases. The scavenger can carry the bucket along with him right up to the latrine and with the help of a scraper collect the night-soil into the bucket which should then be carried to the wheel barrow standing nearby. The bucket can be emptied into the pail on the wheel barrow which when filled can be carried to the trailer, motor van or the pail depot as the case may be. In

the chapter on wheel barrows this has been discussed and recommendations in this regard made therein. In cases, where the wheel barrow can be taken to the latrine, there would not be much difficulty and the bucket can be emptied into the wheel barrow which can then be taken to the next house. However, *in narrow lanes or roads of varying altitude, means like kawar, kawath, kawad or bengi may be used.* In a few places, where buckets have been in use, the Committee saw scavengers carrying the buckets on their heads. This is bound to be so as the buckets supplied there are quite big and it is not easy to carry them by hand, particularly when such buckets are full. Again these are uncovered and so in no way better than the open drum or 'tasla' It is, therefore, necessary that the buckets should be small so as to be carried conveniently by hand. The Committee saw covered light buckets for carrying night-soil from latrines to the wheel barrow/carriage van in Secunderabad and it considers the system prevailing there as a very satisfactory arrangement. The lid of the bucket should be fixed with hinges as otherwise it will be thrown away or the scavengers will not use that. The lid of the buckets seen in Secunderabad is inseparable and collapsible. This facilitates the filling of night-soil in it and ensures its coverage. The sketch of the bucket seen in Secunderabad is shown in figure 18. The Committee recommends that *small covered buckets painted with coal tar of not more than 2 to 3 gallons capacity should also be compelled to use covered buckets which can be costs Rs. 2.75 nP.* This in the long run does not prove costlier than the baskets and drums at present supplied by the local bodies or used by the private scavengers. *Private scavengers should also be compelled to use covered buckets which can be supplied to them by the local bodies in the same manner as the receptacle or scraper at no-profit-no-loss basis. Broken or damaged buckets should be replaced immediately.*

The supply of small buckets may create another problem. The scavengers, in order to avoid more rounds, try to carry as much load as possible which is usually more than their capacity, to the carriage van. In doing so, the night-soil spills and overflows from such a bucket. In parts of Punjab and in Bhopal where uncovered buckets were once introduced, it proved a failure and the scavengers were averse to using such buckets as it involved a larger number of trips from latrines to the carriage vans. The Government of India have been giving grants to all the municipalities and local bodies etc., through State Governments for the purchase of wheel barrows. They have come forward to meet any demand from the local bodies in this regard. If these wheel barrows are introduced, it would enable the scavengers to carry the wheel barrows along with them from house to house and empty night-soil directly from the receptacle into the wheel barrow. The wheel barrow can be taken right up to the latrine and the receptacle emptied therein. Wherever the wheel barrow cannot go inside, it can be placed at the nearest place and the bucket load brought to it. The distances in such cases will be very short.

Cess-pools

23. In many States a common feature contributing to the insanitary condition of the locality is the cesspool. The dry latrine has a small drain leading out to a cesspool where urine, ablution water mixed up with night-soil goes on accumulating. These cesspools have no outlets as they are not connected with the drainage channel. The scavenger takes out buckets full of sullage-water from the cesspools and then pours it into a big drum which is carried on head to the carriage van etc. At some places, the local bodies have provided big cesspools or big drums for storing night-soil before transporting it to the dumps. Such cesspools or drums are commonly found near public latrines to which they are attached. In Rajasthan and Jalgaon in Maharashtra the Committee saw large cesspools full of night-soil, where the scavenger has to dip and fill the bucket with night-soil and hand over to another man who in turn has to hand over the bucket to still another man standing on the municipal van. In this process the man standing at the pool and the other two men all get a complete bath in night-soil. *Collection of night-soil in such cesspools is most insanitary and such inhuman ill use of scavengers engaged in cleaning them should be stopped immediately. The contents of such cesspools must not also be carried as head loads. Cesspools maintained by local bodies, particularly those attached to public latrines should not be allowed to continue and all depots where night-soil is collected in big drums should be closed down. The abolition of cesspools in private houses may take some time and as long these are in existence, the local bodies must introduce mechanical devices for cleaning them periodically. There should be a suction system. in no case should the contents of cesspools be removed by hand but only through mechanical devices. Wherever feasible, lorries like Scamper's should be introduced for sucking the contents of the cesspools. Lorries fitted with suction pumps can also be made use of. In the State of Maharashtra, in Poona, the local body uses Scamper's lorry. Japan has made good progress in this direction. They use big and small vacuum cars for suction of night-soil etc., which avoid human touch. A few specimen designs of vacuum cars obtained from Japan are shown in figures 19-22. The details received from the Indian Embassy in Japan are to be found in Appendix VI. The Committee is of the view that Corporations and big Municipalities or such local bodies as may afford, should think seriously in terms of introducing vacuum cars/lorries etc., for cleansing cesspools.*

**Use of
Scamper's
Lorry. Suction
Pumps
and Vacuum
Cars/Lorries**

**Washing of
Latrines**

24. In many States, private latrines are never washed or not washed for days and weeks together. *It should be ensured that latrines are washed properly and regularly by giving access to the scavenger in the latrine. This would remove the smell and stink of night-soil that pervades in most houses and streets and in our towns.*

TRANSPORTATION OF NIGHT-SOIL

25. This is the most important aspect of the problem. The process involves carrying of night-soil from the latrine seat to the carriage van, pail depot or, in several places, straight to the dumping ground.

Throughout the country, there is, at present, not a single town which can claim to have complete underground sewers. Chandigarh and Bhubaneshwar are the two latest and modern towns but these too have not got complete underground drainage system. There are yet localities where service-latrines exist. In some old towns like Bhopal, there are underground 'Nullahs' which though originally were constructed for the use of sullage water only, are now being used as underground sewers. The intake capacity of such 'Nullahs' is too small and these cannot cater to the needs of the towns. In all areas not covered by underground drainage system, carrying of night-soil is by manual labour. Night-soil in such places is generally taken as head loads, on shoulders or waists—the medium of carriage being a bamboo basket, 'tasla', open drum etc. With the exception of Kerala, where night-soil is not seen being carried as head loads, no other State has made a sincere effort to tackle this problem systematically and scientifically. Efforts to bring in any change whatsoever, have not proved successful.

After collecting night-soil from the latrines, it has to be transported to the place of disposal. In this process, the basket plays a very prominent part at present. Scavengers collect the night-soil from the latrines, put it in a basket and wherever receptacles or baskets are used under the seats, these are taken out and emptied into a bigger basket or drum which is carried on head to the carriage van, if any, or the bullock cart which in turn is taken to the dumping ground for final disposal. The load of night-soil in the bigger basket or drum may vary from 20 seers or more. While carrying head loads, particularly in the rainy season, one can imagine the plight of the unfortunate scavenger carrying an uncovered basket load of night-soil. Such baskets are very common in the States of Punjab, Orissa, Madras, Rajasthan, Mysore, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh, Maharashtra, Gujarat and Delhi. In a few cases, baskets are taken directly to the night-soil dumps. In Orissa the only means of carrying night-soil are the baskets which are invariably carried on the waist and such a practice is as bad as carrying them as head loads. It is, however, noticed that waist loads are not as heavy as head loads. This is not to say that the Committee prefers waist loads to head loads. At a few places, scavengers carry basket loads on shoulders as well. In Punjab and Uttar Pradesh, night-soil and rubbish are carried as head loads before transportation into gunny bags on donkeys to dumping

grounds. In some parts of Madras and Andhra Pradesh, scavengers clean the latrines with the help of a tin-piece and collect night-soil in a 'Winnow' which in turn is emptied into the basket or the drum. In some houses in a few towns in the States of Mysore, Kerala, Madras, Andhra Pradesh, West Bengal and Madhya Pradesh buckets are kept under the seats. These are emptied into the bigger baskets or drums or carried direct to the bullock or buffalo carts. Wherever these buckets are small, it is easy to carry them by hand but so often, these are quite big and when they are full become too heavy to be carried by hand and perforce, the scavengers who are generally women, take them on head or sometimes on shoulders. These buckets or drums get damaged when they give the same trouble as any other means of carriage. The entire process of carrying night-soil from latrine seats to bullock carts etc., as head loads has to be revolutionised. We have to put an end to this which is the root cause of all the trouble. The Committee suggests the use of wheel barrows for the purpose.

Bullock Carts

26. Bullock carts are commonly used throughout the country. These carts are kept mostly at pail depots where loads of night-soil are brought and deposited therein. However, in a few towns, these are stationed at common places. Even in most advanced cities in the country, one easily comes across such carts. A few of the specimens of such carts which are drawn by bullocks or buffaloes are shown in figures 23-26.

These bullock carts when full, move on very slowly spilling in the process rubbish and night-soil all along the streets with flies encircling over them and exhaling bad odour. In most cases, these carts are taken uncovered and very seldom, a 'tat' (jute-piece) is put over that. The scavenger has to sit over the edge of the cart and cannot remain separate from the rubbish. By the time he reaches the dumping ground, he is from head to toe, completely covered with dirt and refuse. *The bullock or bhensa carts are most insanitary and deserve to be abolished at once.*

At Nellore and Guntur in Andhra Pradesh, Committee saw carts which are drawn by men. Three or more men are required to pull a cart. Six or eight heavy drums of 30-40 gallons capacity are placed on the cart which is then drawn by men and carried to the place of disposal. A few specimens of crude type of hand drawn carts are shown in figures 27-29. *The man-drawn carts are an insult to human dignity and must be abolished.*

Some municipalities, which could afford, have introduced pear shape night-soil carts which are drawn by bullocks or 'bhensas'. The body of the tank, the sketch of which is shown in figure 30 is made of iron sheets, can be revolved for cleaning or clearing purposes. This has a lid too and fitted with two steel wheels. The cost of such carts is normally Rs. 300 to Rs. 400. The man has to sit just over the lid of the tank which when broken gives much trouble. The local bodies do not replace them when these are broken as this involves sufficient

expenditure. They, therefore, generally prefer ordinary wooden carts which are very unhygienic.

There are a few more designs of similar carts with one or the other improvement therein and which vary in cost. A few of them are shown in figures 31-33. *All such types of carts etc., are primitive and need immediate replacement.*

The richer municipalities/corporations have purchased trucks, lorries, tractors and trailers etc. While some of these means of transport are quite good some of them cannot escape condemnation. The open truck (figure 34) is as bad as open bullock cart. This goes on spilling the rubbish in the streets. Some of the local bodies when questioned about it, informed that such a transport is used only for carrying refuse but in actual practice the Committee saw even night-soil being transported in such vehicles.

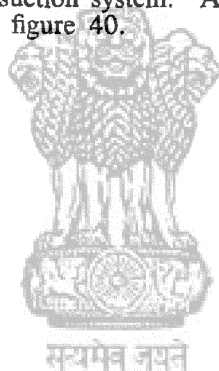
A few of improved types of night-soil vans, tankers etc., are shown in figures 35-39, which may serve as models to the local bodies which have still to mechanise or improve their transport system.

27. In some places, the Committee saw a strange system of collecting night-soil. After bringing night-soil from latrines, it is stored in big tanks mounted on a masonry terrace about 15' to 18' above the ground level. The scavenger has to carry the night-soil load in basket or drum over a stair-case to the tank and deposit the load therein. A lorry or night-soil tanker is brought just under the tank and by opening a cock, night-soil in semi-liquid form, starts pouring into the tanker. For cleaning such a tank which is very big, a scavenger has to enter in it. At a place, it was alleged by some scavengers and social workers, that a man while cleaning such a tank died on account of inhalation of poisonous gases. In Midnapore, we saw night-soil being stored in a wretched cottage with big drums overflowing with night-soil so as to cover the floor. These were later to be removed by filling buckets and pouring them into carts.

At Erwada Jail (Poona) and also Ahmedabad Jail, the Committee saw big drums of about 20-30 gallons capacity carried lifted on a bamboo pole by two prisoners. They are kept near the latrines and all the night-soil when collected is carried to the jail boundary-wall. On a terrace near the wall, they have installed a churning apparatus which is operated by a prisoner. A stream of night-soil falls outside the jail wall through pipe into a small pool. We saw a man standing bare-footed in the pool with night-soil upto his knees, trying to churn it with his feet and a bucket in his hand. In doing so, he was completely sprinkled over with night-soil. Other prisoners who handle big drums also get soiled while putting, lifting or tilting the drums. The night-soil goes on accumulating in the tank outside. At the time, the Committee visited the spot, liquid night-soil was overflowing the tank and the adjoining area had virtually become a pool of night-soil. The municipal night-soil lorry comes at its scheduled time and the night-soil is taken with buckets from the tank and deposited in the lorry, in which process the scavengers working on the

lorry get a full night-soil bath. The prisoners get some remission in terms of their imprisonment for doing the work of scavenging and hence they do not mind doing such sub-human work. The Committee feels that *such tanks and churning operations must not be allowed to continue*. The very simple and scientific system of providing trailers or night-soil tankers etc., at such places can meet the needs, and in the long run, these do not prove costly.

In Secunderabad, the Committee saw a night-soil barrel of about 80 gallons capacity. Night-soil is stored in this barrel by the scavengers after collection from houses or public latrines. A lorry on round, comes along and the knob of the barrel unscrewed and the night-soil poured out into the lorry's tank. The barrel seen by the Committee was, however, kept too close to the ground with the result that first night-soil has to be collected in buckets and then poured into the lorry. This is utterly filthy. Such barrels can either be placed at a higher level so that the night-soil can be poured out right into the lorry's tank or better still there should be a suction system. A specimen of the night-soil barrel is shown in figure 40.



CHAPTER FOUR

WHEEL BARROWS

28. The head-loads of night-soil are generally carried to bullock carts, night-soil depots or motor vans and the distance so covered by the scavenger is anything between two furlong to a mile. The scavengers try to carry as much load as possible per round rather than make two or more trips. Such head loads are normally carried by women scavengers who leave a trail of leaking night-soil and refuse behind. There are no two opinions that such a primitive method of disposal should be put an end to forthwith giving place to a system of carriage by mechanical means.

Consequent on the recommendation of the Scavengers Living Conditions Enquiry Committee, which was appointed by the Bombay Government in 1949, the Government of India, as a first step to make the work of scavenging consistent with human dignity, suggested supplying of wheel barrows/hand carts to sweepers employed by municipalities etc., for scavenging work so that the practice of carrying night-soil as head loads could be eliminated altogether. As it was felt that this requirement if left alone to the municipalities etc., might not, however, be fulfilled in the absence of adequate financial resources, the Government of India in the Ministry of Home Affairs offered to subscribe 50% of the cost towards the purchase of wheel barrows/hand carts through the State Governments to such of the needy municipalities and other local bodies as might undertake to provide immediately to scavengers employed on this type of work, wheel barrows or hand carts and were prepared to contribute the remaining 50% cost with or without the assistance from the State Governments and subject to a further condition that the grant-in-aid was admissible to only such local bodies as were agreeable to stop the practice completely and not to those who might like to take up the scheme piecemeal. On the suggestion made by the Estimates Committee of the Lok Sabha in their 48th Report, this restriction was relaxed on 30th July, 1959. The Government of India offered to give financial assistance to such of the local bodies also who for various financial and other reasons, may not be able immediately to change over completely from the practice of carrying night-soil on head to that of removing it in wheel barrows or hand carts, but may be ready to introduce the scheme gradually however, subject to a condition that the local bodies will, at any rate, prepare a phased programme to completely stop this practice within a period not exceeding five years. A substantial percentage of scavengers in municipal areas do this work not as employees of the local bodies but according to a system under which they enjoy customary rights of cleaning the latrines in certain localities. In the States of Punjab and the Western Districts of Uttar Pradesh, the scavengers have claimed a right over the „possession night-soil and rubbish. It was,

therefore, felt that the practice cannot be stopped completely unless the private scavengers are also made by persuasion or otherwise, to give up the practice of carrying night-soil in baskets etc., as head loads and bring into use wheel barrows instead. The Government of India, *vide* their circular No. 20/2/60-SCT. III, dated the 13th April, 1960, decided to enlarge the scope of the scheme further and invited proposals from State Governments for financial assistance towards the purchase of wheel barrows/hand carts to be provided to municipal as well as private scavengers, however, subject to the condition that the Government of India's grant would be 50% of the expenditure on this scheme.

It is distressing to learn that the response to this offer from local bodies/States has been very poor. It appears that the municipalities and other local bodies have not taken up the scheme as seriously as they should have done. During the visits of the Committee to various municipalities, it was found that State Governments had not informed all the municipalities, particularly the smaller ones, about the scheme for the supply of wheel barrows, and they were as such quite unaware about it. Some of the States had not taken any advantage of this scheme at all. Many of the States had not utilised the amounts sanctioned to them by the Ministry of Home Affairs. The following table shows the amounts sanctioned to various States/Union Territories by the Ministry of Home Affairs for the purchase of wheel/work (as on 28-7-1960).

CENTRALLY SPONSORED SCHEME

Grant-in-aid sanctioned to Municipalities/Local Bodies through State Governments/Union Administrations for the purchase of wheel barrows/hand carts for sweepers employed on scavenging work.

(Amount in Rupees)

S. No.	Name of State	Amount sanctioned during				Remarks
		1957-58	1958-59	1959-60	1960-61	
1.	Andhra Pradesh	—	—	—	1,58,700	
2.	Assam	*41,000	—	—	—	*Surrendered Rs. 350.
3.	Bihar	—	—	—	2,32,000	
4.	Bombay	%1,64,000	1,00,000	2,00,000	—	%Surrendered full amount
5.	Kerala	£76,000	37,100	52,600	—	£Surrendered Rs. 41,600.
6.	Madhya Pradesh	—	2,37,600	1,32,450	—	
7.	Madras	**30,000	%%30,000	64,050	1,69,641	**Surrendered full amount. %%Surrendered Rs. 11,150.
8.	Mysore	92,000	58,350	41,615	—	
9.	Orissa	39,000	—	—	—	

10.	Pondi-cherry	@ @6,000	—	—	—	@ @ Surrendered Rs. 600.
11.	Punjab	££1,32,000	—	1,32,000	—	££ Surrendered full amount.
12.	Rajasthan	93,000	—	1,45,730	—	
13.	Uttar Pradesh	1,49,000	1,26,200	1,24,300	—	
14.	West Bengal	% @ 1,02,500	£ @ 42,600	42,600	—	% @ Surrendered Rs. 41,374. £ @ Surrendered full amount.
15.	Jammu & Kashmir	@ 17,000	—	—	—	@ Surrendered full amount.
16.	Delhi	£££39,500	—	—	—	£££ Surrendered Rs. 1,762.
17.	Himachal Pradesh	* @ 3,000	—	27,920	—	* @ Surrendered Rs. 42.06 nP.
TOTAL ..		9,84,000	6,31,850	9,63,265	5,60,341	

Thus, the result of the allotment of funds for the purchase of wheel barrows has been rather disappointing. From the statement, it is also observed that some of the States have surrendered the entire amounts and some a part thereof giving indication that rest of the amounts have been utilised by them. The Committee, however, feel that it does not show the correct picture. Whereas, amounts have been sanctioned to States, these have in many cases not been utilised at all, and in cases where amounts have been utilised these have been negligible. It is not known if such State Governments have submitted any utilisation certificates to the Government of India and if they have done so, the Committee would like to reserve its comments. In some cases, where the wheel barrows have been introduced, it was noticed that these are most improper and so heavy that they are bound to be discarded by the scavengers. Scavenging work is mostly done by women and it is therefore, essential that there should be a type of wheel barrow suitable to them. Frankly speaking, many of the State Governments have not studied the scheme properly and there have been many misunderstandings. There is as yet no standardized wheel barrow with the result that the amounts spent so far, have virtually gone to waste. In Bihar, the Committee saw a small wheel barrow on one wheel having two closed containers each of 10 gallons capacity costing about Rs. 207. A private company in Bihar designed a wheel barrow the blueprint of which has been circulated to all their local authorities by the Bihar Government. This contains two cylindrical buckets of 10 gallons capacity each made of 20 SWG Galv. sheet having side handles and detachable buckets. Each such wheel barrow, ex-workshop, costs Rs. 200 and the wheel barrow with ball bearing costs Rs. 245 each. The Hubli Municipality in Mysore has purchased some wheel barrows from Panipat (Punjab) each costing Rs. 135. These have two pails of 5 gallons capacity with rubber tyres. Though Punjab has supplied wheel barrows

to Mysore, it does not appear that these are used within its own State. During the course of discussions, the local authorities in Puri (Orissa) informed the Committee that they had placed orders for the purchase of 150 wheel barrows at a cost of Rs. 500 each. At Vellore in Madras State and Nellore in Andhra Pradesh, the Committee saw big uncovered drums with 20 to 30 gallons capacity each. In Bhopal (Madhya Pradesh) the Committee saw some wheel barrows which are now stated to be out of commission, for carrying a basket of night-soil. The wheel barrow has four small wheels, an iron frame with a 'tasla' like basement in the centre resting upon the frame-work on which the basket is kept. The basket is covered with a round tin piece. The model, looked quite primitive and ludicrous.

Another type of wheel barrow, which may also be called as drum wheel barrow, is very common particularly in the States of Kerala, Madras, Mysore, Andhra Pradesh and Madhya Pradesh etc. The capacity of the drum varies from 15 to 40 gallons and the more common amongst them has a 20-30 gallons capacity. A few of the specimens of such wheel barrows are shown in figures 41 and 42.

Generally, these drums have no lids and wherever lids are provided, these are not in use. We found that scavengers do not like using the lids. Besides, the drums are too heavy particularly for women who definitely do not take to them. The lifting and tilting of these wheel barrows is difficult for them. Moreover, it is unhygienic because while tilting them into the trenches, night-soil spills over the scavengers. At several places, such wheel barrows have been discarded. The cost of such wheel barrows is also quite heavy. *The committee feels that the drum wheel barrows need replacement with better designs.*

The Nagpur Corporation had supplied about 200 wheel barrows as shown in figure 43 with pails to their employees. The scavengers discarded them and did not like to use them. They removed the pails to their houses for storing water. In Andhra Pradesh, the Committee was given to understand that any appliance made of iron is bound to be stolen away as scrap brings them good price. Due to such fear, even dust-bins are not provided. Two specimens of very crude types of wheel barrows seen by the Committee are shown in figures 44 and 45.

Shown in figure 47 is the design of a slanting but open tray type wheel barrow used in several municipalities meant for carrying rubbish etc., but the Committee saw the scavengers actually using it for carrying night-soil.

The Committee saw a few improved types of wheel barrows also. Indore has introduced a wheel barrow which costs only Rs. 88.34 nP. Kharagpur has still another design the cost of which comes to Rs. 195 each. The sketches of both of these types of wheel barrows are shown in figures 47 and 48.

It has been observed that the pails of these wheel barrows are kept quite loose and while carrying them go on jingling and knocking each other. These are kept on the basement of the iron frame and while negotiating rough roads, streets or 'kucha'

paths etc., the scavengers experience difficulty in pushing them and night-soil is likely to spill. The iron wheels also do not help in smooth pushing often give jolts. The lids are unchained, and as it is their habit, the scavengers do not use them.

In all types of wheel barrows that have been introduced, there is one or the other defect according to local conditions and they also have certain merits. After having seen various types of wheel barrows and taking into consideration all relevant factors, the Committee is of the opinion that the design given in figure 49 may prove most useful. It may of course be modified or improved in the light of local conditions. The frame of the wheel barrow should be all steel one with solid rubber tyre wheels, with ball bearings as this facilitates proper handling. The pails should not be of more than 5 gallons capacity each and the combined capacity of both the pails should not exceed 10 gallons capacity but 8 gallons full. Even women scavengers would not be able to resist such a light wheel barrow. The lids should be collapsible and fixed with hinges to the body of the pail. The bottom of the pail should be such that night-soil does not stick. The cost of such a wheel barrow would not normally exceed Rs. 100 to Rs. 120, if made locally, or Rs. 120 to Rs. 140 if imported from any other State. The manufacture of such a wheel barrow on a large scale for requirements throughout the State could be centralised at some place for distribution to all municipalities in which case the cost would definitely come further down and the design will conform to the required pattern uniformly.

The municipalities of Hubli in Mysore State and Sholapur in Maharashtra have some wheel barrows with 4 pails as shown in figures 50 and 51. The cost of such a wheel barrow may vary from Rs. 175 to Rs. 200. This, however, is quite heavy and the scavengers using them complained of their weight. Such a wheel barrow can be used by man only and not by woman.

Wherever necessary some administrative adjustments may be carried out. Men may do the pushing and women the cleaning. The wheel barrow may be kept moving from house to house along with the woman worker.

29. As already pointed out earlier, wheel barrows are difficult to ply in areas with varying road gradients as for instance, in hill stations. It may also not be possible to ply them inside very narrow lanes. However, for such places, the Committee recommends the use of *kawath*, also known as *kawar*, *kawad* or *benghi*. Two pails each of 4 to 5 gallons capacity hanging at either end of a bamboo pole at a distance of about 6 feet or so may be carried on shoulder like the milk cans which are found convenient in such areas. An iron hook at either end may also be fitted to the pole. People do carry vegetables and so many other things on *Kawar* in most parts of the country. In Singapore, night-soil also is carried on *Kawar*. The Kawath

30. The main difficulty in popularising the introduction of wheel barrows is the passive attitude of the scavengers. They feel that wheel barrows are new and difficult to ply. They find it more convenient to carry the load on head by habit. They Passive attitude of the Scavengers

feel that their women folk will never take to it. The Committee is of the opinion that this is only old prejudice and old habits die hard. There is need for change of habits. Women have already taken up to small push carts in some places and the Committee saw them working in the States of West Bengal, Rajasthan and also in Delhi. When questioned at several places during their visit, women showed their willingness and on pointing out the advantages of such a system welcomed their introduction.

Some of the scavengers or interested persons may try to persuade others not to take up to such a system due to one or the other difficulty, but there is no reason why this cannot prove a success. It is all a question of tactful handling of human beings. The local authorities can make a beginning with a few intelligent scavengers and with the assistance of non-official organisations or social workers interested in the welfare of scavengers, persuade them to use the wheel barrows. In the beginning, only a few wheel barrows may be put into use on an experimental basis and on their becoming popular, push in more wheel barrows into use. Popularising the use of wheel barrows will depend mostly on the efforts of public health officials who by persuasion and by amending their bye-laws etc., can achieve a substantial measure of success. The Committee is constrained to observe that many health officers do not take much interest in the welfare of scavengers and continue to adopt an attitude of traditional indifference. Such an unhelpful attitude is not in consonance with the spirit of a democratic set up. At a few places, the Committee also happened to come across a few health officers who were so popular with the scavengers that they would not hear of their transfer from their midst. In such places, the advice of health officers can play a most prominent part. The proper approach is most essential in changing habits and there is need for the slow, persistent, persuasive and tactful introduction of improvements.

Success depends on persuasive & intelligent introduction by officials

A few municipalities gave the impression that as they have plans or intend planning in the near future for laying underground drainage system, any amount spent on wheel barrows would be a complete waste. The Committee cannot agree to such an argument. No doubt, the Committee wishes that the underground drainage system should be brought in as quickly as possible but there are still so many practical difficulties due to which complete underground drainage system is not likely to come within a foreseeable future. Not to speak of smaller municipalities or towns, even in most developed and modern towns, dry service-latrines still exist and as long as these latrines are there, the problem will continue. Conditions have to be improved and for this it is essential that the municipalities, in spite of having plans for underground drainage system, must take up the scheme of wheel barrows without further delay. The wheel barrows are not likely to last for ever. These have to be kept in use as long as their necessity exists. The number of wheel barrows can be reduced proportionately with the extension of the underground drainage line. As it is admitted that the evil practice of carrying night-soil as head loads should be immediately abolished,

Supply of Wheel Barrows to areas where Underground Drainage is being introduced

there is no reason why steps should not be taken forthwith for the introduction of wheel barrows.

31. For transporting night-soil and refuse, the bigger municipalities use lorries, trucks, motor vans, tankers etc., about which some mention has been made in the previous chapter also. Some of the municipalities have started using trailers and tractors and the Committee understands that this is cheaper, convenient and more hygienic. Generally one tractor has 3 to 4 trailers which are placed at suitable places within easy reach. The tractor takes them away when full one by one leaving empties in their places. The trailers can be emptied over the trenches just by opening a cock. In handling such trailers and tractors, not only cost but also manpower is saved. The number of tractors and trailers can be increased according to the needs of the localities. The Committee feels that *bullock carts, Bhensa carts, donkey gangs etc., should be replaced by tractors and trailers or such other mechanical vehicles. In places where the trailers may not be convenient to ply, the local authorities may make use of three-wheelers (like Tempo Henseed). The intake capacity of these three-wheelers is quite good. Cost of maintenance is not much and these can ply in narrow streets easily.* The Hubli Municipality is making good use of them. The trailers must be placed at places within easy approach of the scavengers and where these are needed more.

Tractors and Trailers for carrying Night-Soil

The entire process of dealing with night-soil from the latrine to the places of disposal would thus involve—

Sum up the Process of Clearing Night-Soil

- (a) collecting of night-soil from the receptacle under the latrine-seat with the help of a proper scraper into a bucket provided with a collapsible lid;
- (b) lifting and emptying of the bucket into the pail of the wheel barrow;
- (c) carrying of wheel barrow to the tanker over the trailer, or pail depot wherever it is in use and emptying the pails into the trailer etc.,
- (d) drawing of trailer by the tractor to the dumping ground or the place of disposal.

32. For the administration of these schemes, the main burden will have to be borne by the local bodies concerned with or without the assistance from the State Governments. They will have to make necessary adjustments and provisions in their bye-laws, rules etc. The State Governments will have to ensure that their local bodies agree to adopt these measures uniformly throughout the States. As regards the financial liability, the Government of India have been giving 50% as grant towards the purchase of wheel barrows etc., and are prepared to meet any demand from the local bodies. The Committee, however, feels that the present arrangements are not working properly and the local authorities do not spend the amounts for the purpose as they should do. The local bodies feel that other items like water supply, lights, roads etc., are more important from their point of view and they prefer spending more money on things which give a better look

Financial Aspects

rather on the improvement of scavenging conditions or on welfare of scavengers which is intimately connected with public health. Some of the local bodies are so poor that they cannot afford even small amounts for such schemes. Throughout the country, the amounts provided by the local bodies for improving scavenging conditions and the living conditions of scavengers are insignificant. They do not want to spend any amount on the purchase of wheel barrows and accordingly many of the States and municipalities have not made use of the offer of the Government of India. Some of the suggestions received by the Committee in this regard from the local bodies are as under :—

- (a) The entire funds for purchase of wheel barrows etc., should be provided by the Central Government.
- (b) The Government of India should offer 50% as grant and advance the remaining 50% as loan to local bodies which may be recovered in easy instalments.
- (c) 75% should be given by the Central Government and the remaining 25% be contributed by the State Government to local bodies.
- (d) 50% should be given by the Centre as grant, 25% as grant by the State Government and the local body to contribute only the remaining 25% from their own resources.

The Committee has given serious thought to all the above suggestions and feels that the following pattern of assistance may be adopted :—

All the local bodies in the country are not likely to implement the scheme of introduction of wheel barrows as expeditiously as it is desirable if the present pattern of assistance involving their share of expenditure is continued. *This being so, and considering the matter as urgent the best course would be for Government of India to meet the entire cost of wheel barrows.*

In case the above suggestion is not practicable, the Committee would suggest that :

- (i) *The poorest local bodies should be given 100% assistance—75% to be given by the Central Government and 25% by the State Government—the entire amount to be treated as grant;*
- (ii) *For radius local bodies, the Government's grant can be 75%—50% to be given by the Central Government and 25% by the State Government, and the local body to contribute only the remaining 25% from its own resources;*
- (iii) *For the bigger Municipalities and corporations etc., the Government of India's assistance should be 50%, the rest to be borne by the local body alone or by the local body and the State Government concerned together.*

This formula would hold good in case of States. There is, however, no such problem with Union Territories. The Union Territories being under the administrative control of the Central Government, the entire expenditure on welfare schemes etc., is being borne by Central Government and as such there is no difficulty in carrying out these schemes successfully. There being no financial difficulties, the Union Territories are supposed to take a lead in the abolition of carrying night-soil as head loads and it has been the persistent desire of the Home Minister that at least in the Union Territories the inhuman practice must be stopped immediately. The Ministry of Home Affairs have been writing to the Union Administrations again and again but the progress achieved there has been distressingly slow.

33. It is further suggested that—*In all cases where the local bodies concerned need loans for meeting their share of expenditure, the State Governments should help the local bodies by advancing loans to them.*

Loans for
purchase of
Wheel Bar-
rows

The Ministry of Home Affairs do not give assistance for the purchase of other mechanical equipment like tractors and trailers or vans etc. It is suggested that the *State Governments should find the funds which may be advanced to the local bodies as grants wherever possible or otherwise in the form of loans. If possible, necessary funds may also be found from the agricultural programmes for converting night-soil into manure. If the Ministry of Health provide any funds for such purpose that may be made use of.*

Loans for
Tractors and
Trailers etc.

34. As at present, the local bodies make *ad hoc* allocations out of their annual budgets for the improvement of scavenging conditions and the conditions of scavengers. This, however, does not meet the requirements of the problem, nor even the ends of justice. The Committee, therefore, suggests that *the local bodies should earmark a fixed percentage out of their annual budgets for the improvement of scavenging conditions and the living conditions of scavengers.* Only then would it be possible for some substantial results to be achieved. It would be better if ratio of percentage can be fixed on the basis of a phased programme during which period the entire problem is solved.

Annual al-
lotments for
improvement
of the condi-
tions of Sca-
venging and
Scavengers

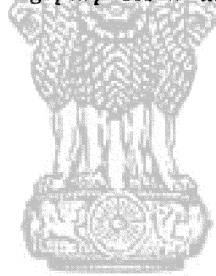
35. As regards the supply of wheel barrows to private scavengers not in the employ of the local bodies, it is felt that they not being in municipal service may create many problems for the local bodies. They may not maintain the wheel barrows properly. Since Government of India have extended the scope of their assistance so as to cover private scavengers also, it is essential that due and proper care is taken for the upkeep and maintenance of the wheel barrows which may be supplied to them. A municipality informed the Committee that it already had in mind to provide wheel barrows to private scavengers also much in advance of the instructions from the Central Government. It has consulted the leaders of the private scavengers and taking in writing from the scavengers who would be supplied with wheel barrows that they would be entirely responsible for the upkeep of the wheel barrows in proper condition and for

Supply of
Wheel Bar-
rows to Pri-
vate Scaven-
gers

taking all necessary steps for their maintenance. Besides, they intend using the influence of the social workers for the purpose. The Committee suggests that wherever wheel barrows are supplied to private scavengers, it should be the responsibility of the local body to watch the proper use and maintenance of these wheel barrows through the area sanitary inspectors.

Long-handled Brooms

36. The Committee would like to add a few lines about the long-handled brooms. The Prime Minister has been very keen on the supply of long-handled brooms to the sweepers. The squatting or bending postures necessitated by the traditional broom (fig. 52) is not in consonance with the status of the common man in the new India. The stance that goes with the long handled broom accords more with the spirit of the times, and gives much relief to the worker (fig. 53). In some municipalities, long-handled brooms are in use and found to be very convenient. The Home Minister, Shri G. B. Pant, during the meeting of the Central Advisory Board for Harijan Welfare held on the 29th July, 1960, also stressed the need for the introduction of the long-handled broom. The Committee feels that *long-handled broom with a small khurpi (flat scraper) fixed at the other end for scraping purposes would be found very convenient.*



सत्यमेव जयते

CHAPTER FIVE

IMPLEMENTS

37. Implements are a necessity for a scavenger. As a mechanic cannot do without his tools, we cannot expect a scavenger to carry out his duties properly without necessary implements. Many municipalities do not provide implements to their scavengers. Instead, they give them some allowance once in six-months or annually and they are expected to equip themselves with implements. This allowance varies from Rs. 3 to Rs. 6. The amount paid in cash, in fact, is seldom utilised for the purpose it is intended. Just as the scavengers do not make use of the soap allowance given by some of the municipalities, they do not also utilise the implements' allowance for the purpose. It is treated as an addition to their salary and spent in the usual manner. The small allowance given to scavengers is so inadequate that they cannot purchase all the implements required by them and perforce have to carry on their duties by unclean methods. The Committee, therefore, suggests that *instead of giving implements' allowance to scavengers, local bodies should supply all the necessary and proper implements to scavengers to carry out their duties.*

Implements
Allowance
now in vogue

38. The Committee has suggested supplying of certain simple implements for cleaning of latrines, collection of night-soil, its carriage to pail-depots or carriage vans and for disposal at the dumping grounds etc. These are some of the implements necessary for carrying out the duties of a scavenger in a sanitary way. There can be other improved type of implements which can further facilitate the working conditions of the scavengers. Unless public health officers apply their minds to the problem, not much headway can be made. Being in constant touch with the scavengers and their work, they can think out better about the continuous improvements of implements. As long as customary rights exist, private scavengers will continue to adopt unclean methods. There is urgent need for municipalisation of scavenging which is the primary responsibility of the local bodies. Municipalities and other local bodies should ensure that private scavengers adopt sanitary methods of cleaning. *The local bodies by adopting necessary bye-laws should see that even private scavengers are equipped with necessary implements for use. Such implements are not very costly and can be supplied easily by local bodies.*

NIGHT-SOIL-DEPOTS

Need for
improving
Pail-depots

39. After collecting from houses, night-soil has to be brought to a night-soil-depot for transportation to the dumping ground or any other place of disposal. This is yet another place where the scavenger has to remain in very close contact with night-soil and in the process of loading and unloading she or he becomes dirty. Unless and until the pail-depots and the methods of work there are improved, the scavengers cannot avoid bodily touch with night-soil. After having visited many towns in different States, the Committee has come to the conclusion that the maintenance of the pail-depots has not at all received the attention at the hands of the local officers that it deserves.

Distance
between
Pail-depots
and Houses

40. The first thing the Committee noticed is that the pail-depots are very far and few in number and as such do not cater to the actual needs of the growing towns. The number of pail-depots is too inadequate and the pail-depots already in existence are located far away from the areas where they are actually required. The scavengers have to carry the loads of night-soil from houses to the pail-depots covering distances ranging from 2 furlongs to a mile. Every time, the basket or the drum is full, the scavenger has to carry it to the pail-depot for emptying and bring it back to carry the load again and so on. To avoid frequent trips from houses to pail-depots, the scavengers accumulate the night-soil in a corner of the street or stealthily dispose them of into the open drain wherever such a drain exists. This makes the entire area filthy and also there is waste of night-soil which can be very well converted into manure. Some municipalities tried to introduce buckets for carrying night-soil. In order to minimise the number of trips, heavy buckets with capacity varying from 6 to 8 gallons or so were supplied. These were expected to be carried by hand but could we achieve our objective by supplying heavy buckets and keeping the pail-depots at such far off and scattered places? The woman scavengers invariably carry the buckets on head as it enables them to cover long distances conveniently and after making a couple of trips or more they throw away the night-soil into a corner of the street or into the nearest drain. Even if the wheel barrows or closed buckets as suggested by the Committee in earlier chapters are to be introduced these will not bring in the desired change unless sincere efforts are made to shorten the distances between the houses and pail-depots. To reduce the distance, the number of pail-depots has to be increased. In places where pail-depots in sufficient number already exist but are situated at far off places from the habitation, these will have to be brought nearer. The Committee therefore suggests, that *the number of pail-depots must be increased according to the needs. The pail-depots should be constructed at places where it is convenient and*

within easy reach of the scavengers. In some cases, it would be argued that due to over-crowding there is no place in a town for constructing additional pail-depots. In such cases, the Committee feels, trailers can be used more conveniently. These can be stationed at suitable places and taken away with the help of a tractor at periodical intervals. The trailers do not occupy much space and if maintained properly, do not prove a nuisance.

Use of more
Trailers and
Tractors

The problem gets minimised in towns which have flush system or which are using tankers, trailers etc., in sufficient numbers. The local body puts trailers in different sectors in the town and within easy reach of the scavengers. Even in towns where underground sewers take away all the affluent to the sewage plant, there remains the necessity of maintaining the pail-depots at least for the refuse of the town and night-soil of animals and of course of the grown-ups and children who are in the habit of squatting at any available place and over the surface drains.

The existing conditions of the night-soil—pail-depots and the scavengers working there are extremely unsatisfactory and deserve immediate attention of the local bodies.

41. Even in cities such as Calcutta, Simla, etc., which have underground sewers, the working conditions of scavengers at the pail-depots have not at all worried the local authorities. These are not the only two cities but in many of the towns with underground sewers the conditions are more or less the same. In towns having underground sewers, it has been seen that the night-soil-pail-depots are either constructed just over the underground sewers or are connected with them through pipes. The building structure of night-soil-pail-depots at such places is very narrow and the scavenger has to work with great difficulty. The pail-depots have a hole in the centre of the floor which is connected with the underground sewers. In some cases, there is an iron-bar sieve over the passage which however, generally remains uncovered. The scavenger has to bring night-soil in drums, baskets etc., to the pail-depots and empty the load into the passage in the centre of the depot. From above, flowing water falls on the mouth of the hole diluting the night-soil. An attendant at the pail-depot goes on churning the night-soil with the help of a bamboo or a spade. These implements are too inadequate for him and invariably he has to churn the night-soil with his bare feet. Whenever, the depot gets clogged up, which is very common as the night-soil brought by the scavengers has rags, broken, earthen ware etc., thrown into it, the scavenger has to clear the hole with his bare hands. In such a process, his legs, hands and even body are completely bathed in night-soil. As referred to in the introductory chapter, in Calcutta, the Committee saw the scavengers wading through, bare-footed, in ankle deep night-soil diluted with water which was spread over in an area of about 40-50 square yards. They were trying to open the clogged passage in the depot. Though the depot was full, yet truck loads of night-soil were being emptied therein adding more to the misery of the scavengers working there. Some municipalities do not bother to construct pail-depots. In such places, there are cess-pools for storing night-soil. At some places these cess-pools

Conditions
of existing
Night-soil
pail-depots

are attached to the public latrines but at some others, the scavengers after bringing the night-soil from houses deposit the same into the cess-pools. The scavengers have to take out bucketfuls of night-soil for emptying them into the tanker or truck. A few cities like Sholapur have yet a novelty. There is a cylindrical type of night-soil depot. Big drums having an opening in the base are placed at a height of about 18 to 20 feet from the ground level. Night-soil is taken up the platform through a staircase and stored in these drums. The night-soil carrier is brought just under the drums and a knob unscrewed. The night-soil starts pouring into the night-soil carrier splashing about night soil in the process and after the night-soil carrier has left, the night-soil goes on trickling from the drums making the floor dirty and the entire atmosphere unhygienic and stinking. In Baroda, a night-soil tank has been built at a height of about 18 feet or so from the ground level and the women scavengers have to carry the night-soil load on head right up to the tank and deposit it therein. Then night-soil is mixed with water, churned in the tank and poured down into the night-soil carrier splashing about night-soil in the process and after carts full of rubbish and mixed with night-soil, are tilted from a high platform into the tipping lorries down below. In Delhi almost in the heart of the city, cart loads of night-soil and refuse drawn by bullocks are similarly tilted from a platform into a railway wagon (fig. 54). In this process of tilting the bullock cart, the refuse gets scattered all around and spreads a layer of dust in the air. The very common sight is, however, of the depots where a small platform so often 'kucha' is provided. The bullock carts are brought to the siding and drums, baskets etc., emptied therein. The scavengers have to lift the loads to the platform and then to the bullock cart or truck. In most of the cases, drums of about 30-40 gallons capacity have to be lifted and tilted. In a few places like Nellore at the pail-depots, the drums are put on the bullock cart and then carried to the drums. So often, children of 10 years of age and below bring in the night-soil loads. They find it extremely difficult to empty the load into the carrier, as there are no attendants in most of the depots. The more thoughtful local bodies are using trailers which are kept at the pail-depots and carried away at periodical intervals but they are very few. Some provide separate depots for night-soil and refuse. In many places like Delhi, there are no platforms etc. The scavengers have to lift the load almost to their own height and empty the same in open bullock carts.

42. There is an urgent need for improving the conditions of pail-depots. The work must be carried in hygienic conditions and efforts should be made to ensure that the scavengers avoid bodily touch with the night-soil and rubbish. The Committee recommends that *cess-pools for storing night-soil before transportation should not be allowed to continue. The workers at night-soil-pail-depots must be provided with gum boots, gloves, aprons, waterproof headgear, long spades and rakes for pulling out cloth pieces etc., and avoid clogging. The structure of such depots where perforce, the scavengers have to wade through night-soil must be altered. The provision of trailers can minimise the difficulty to a great extent. The depots may be so constructed as to*

allow the trailers to clear the load in the mouth of the depot itself. In case of dry pail-depots, platforms of proper height with a sloping siding at either ends just like railway platforms must be constructed so that the wheel barrows can be brought with ease over the platform and poured into the standing trailer. At every pail-depot, there must be an attendant. It should be his duty to handle the load at the depot. These are a few of the hints and the municipalities can arrange and improve the local conditions but in any case, they must ensure that the system is sanitary and scientific.

43. The pail-depots, if maintained properly can also solve ^{Need for Amenities at the Depots} many other problems of the scavengers and help a lot in making the occupation cleaner. So often, it has been noticed that there is no water at all or not in sufficient quantity for washing or bathing purposes. The bullock carts, vans, drums, baskets etc., remain uncleared. The scavengers invariably go back to their homes without washing and in towns, where water is supplied during certain restricted hours only, by the time they reach back their homes, water supply stops. They somehow or the other have to manage with whatever little water they possibly can obtain. Their clothes, however, remain unclean and without changing them, they start their domestic work, mix with their children, eat and drink and do everything in a very usual and normal way. In the morning by the time they leave their houses, there is no water in taps and they have to reach for their morning attendance at the pail-depots. Water is a must for this profession not only for the workers but for vehicles etc., also. The Committee, therefore, suggests that *at every pail-depot and dumping ground arrangements for the supply of sufficient water for washing the vehicles, wheel barrows, drums, the depot, etc., and for scavengers to bathe and wash their clothes, must be provided.* If the scavengers get a bath before returning to their homes, it would be more hygienic for them as well as for their children. There may be separate bath-rooms for men and women. A set for each can be sufficient in most of the cases. However, the number may be increased if necessary *wherever possible, arrangements for changing clothes before and after the work should be provided.* The scavengers may change into their working dress before proceeding to work and revert back to their usual dress after the work and bathe before returning home. This will be a great step-forward in the improvement of their working conditions.

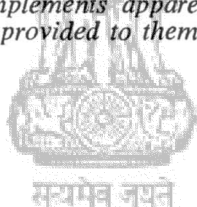
44. At Simla in Punjab the Committee saw a disinfection ^{Disinfection Station} station. Here clothes of scavengers, labourers, clothes from hospitals and such other institutions are given steam treatment which kills all the germs etc. There is also provision for scavengers, labourers and others for taking their bath. It was given to understand that there are three such centres there, the one visited by the Committee being the biggest. Such disinfection centres seem to be very useful though the cost of each such centre runs over a lakh or so. The Committee recommends that *Corporations, big municipalities and such other local bodies who can afford such disinfection centres should be established where clothes of the*

scavengers may be given steam treatment. The local bodies may extend the benefit to others as well.

45. In some towns where wheel barrows/hand carts have been provided, scavengers are supposed to take care of them and keep them at their own residences. Scavengers generally live in hovels or small huts. They have not got much space for themselves, what to speak of accommodating the wheel barrows also. They have no water to wash them. There is also the fear of thefts of these wheels barrows. To obviate such difficulties, the Committee suggests that *wherever the scavengers do not find it convenient to keep the wheel barrows/hand carts etc., at the places of their residences, arrangements for keeping the wheel barrows at the pail-depots may be made. Their cleanliness can also be ensured.*

Persons working in Gutters

46. In the towns with underground drainage system, scavengers are required to get down in the gutters for cleaning and removing obstacles in the free flow of sullage etc. It has been complained at many a place that the scavengers have to wade through knee or waist-deep sullage water without the help of any protective measures. They work bare-footed and without any mask. In some cases, it is alleged deaths have also occurred. This should at any rate be avoided. *For cleaning underground sewers, use should be made of mechanical devices already in vogue in big towns. Safety of the life of persons working in gutters should be ensured and such implements apparels, masks, etc., as may be considered necessary provided to them.*



DUMPING GROUNDS

47. All the night-soil and refuse of the town is brought to the dumping grounds for final disposal. In towns, having underground drainage system and the sewage disposal plants, the sullage is diverted to the plants for necessary treatment. There is no serious problem in such cases but in case of dumping grounds, the scavengers have to face enormous difficulties.

There is a different system of dumping in the plains as distinguished from dumping in rocky areas. In the plains with 'kucha' soil, trenches are dug and night-soil and refuse dumped into them for composting. Such trenches, however, cannot be dug easily in rocky areas. Wherever possible, the local bodies try to dig trenches though these may not be deep enough, but in the very hard soil where digging is a problem, the night-soil and refuse are dumped just on the surface of the ground. Dumps with trenches are very common throughout the country. The trenches generally measure about $12' \times 5' \times 3'$ or $15' \times 7' \times 3'$ or so but in a few cases, the Committee has seen much larger trenches. These trenches are always 'kucha' but at Jodhpur in the State of Rajasthan, the Committee saw trenches measuring about 3 feet deep, 15 feet wide and 225 feet long which are all cemented and made pucca. This, no doubt, has improved the sanitary conditions to a great extent. The conditions of the dumping grounds and the workers there as seen by the Committee have been found horrible. The Surat and Karnal dumping grounds may perhaps be considered some of the worst in the country.

48. Most of the dumping grounds have been found very near the habitation and in some cases just within the town itself. A few of the local bodies had taken care to keep the dumping grounds at quite a good distance from the towns proper but with the growth of population, the towns have grown further up to the dumping grounds and the local bodies are again faced with the problem of shifting such grounds from there. This happens with the growth of all the towns. The Committee feels that the *dumping grounds should be as far away from the towns as possible. Where towns have extended dumping grounds should be shifted further beyond.*

Most of the dumping grounds are too small in comparison to the population and needs of the towns. At other places where the size of the grounds is just sufficient, the entire night-soil and refuse from the town is not collected. Scavengers, particularly the women, instead of making trips from houses to the pail-depots or the trailers etc., throw the night-soil in street corners or in the surface drains. This is quite common even in Punjab, where night-soil is considered to be the property of the private scavengers and the manure, prepared from night-soil fetches them

a handsome price. There it was given to understand, during certain periods, full and proper composting is not allowed by the agriculturists and they take away even half-composted manure. The scavengers as in Karnal, clean house latrines for a negligible amount of annas four, six, eight or twelve a year and do not press for any increase in it as they know night-soil manure brings them a price. The Committee feels that—*if all the night-soil and refuse of the town is collected and brought to the dumping ground, it would increase the income from the sale of manure.* For this purpose, it is however, necessary that proper vehicles for transport are supplied and vigilance is maintained that no night-soil is wasted by the scavengers or the members of the public.

With the exception of two or three towns, the income from the sale of manure throughout the country is too low and in fact it does not pay them at all. Everywhere the Committee went, it was complained that the expenditure on the maintenance of dumping grounds is much more than the income from them. Most of the local bodies are not keeping separate accounts for the expenditure on dumping grounds. It is counted along with other items of expenditure on conservancy as a whole. What is the average percentage of loss on the maintenance of dumping grounds, is therefore difficult to calculate. On the whole, as it exists today, it is running into heavy loss. The Committee however, feels that with the exception of a few isolated cases, the position need not be so tight as it is considered to be. There is no reason why the entire business should not be turned into a profit making one and at least the cost of maintenance may be realised. There are a few municipalities which by taking some initiative in this direction, have made it a profitable business. Madurai is a pioneer in this field and has done exceedingly well.

All the local bodies do not make full use of night-soil due to one or the other reason. Himachal Pradesh disposes of the night-soil by throwing it into the 'nullah', pits or burn it in incinerators. Burning is done in some parts of Punjab as well.

Bombay Corporation treats the night-soil in a very expensive plant but ultimately throws the entire treated stuff into the sea. The authorities there could not explain this wastage. It is, therefore, of primary importance that all the night-soil and refuse in town is collected properly and brought to the dumping grounds in suitable vans which minimise spilling and treated properly. The local authorities make use of refuse for filling in the pits in the town for levelling the ground and making the place fit for habitation.

Most of the dumping grounds are stinking and full of flies and it is a tough job to visit them. The conditions at a few of them were so nauseating that one member or the other of the Committee invariably felt sick during the visit. No proper care is taken about scientific composting. The refuse and night-soil is just thrown without proper treatment. Some authorities, however, have taken care about it and even without the help of any chemical treatment, have tried to maintain the grounds in proper condition. They spread a layer of refuse in the trench, cover it up with

a layer of night-soil, again put a layer of refuse and then night-soil and so on till the trench is full up to the brim. They give the contents of the trench proper turning after periodical intervals. This turning helps a lot in killing the eggs or larvae of flies as the chemical decomposition of the contents releases so much heat that it is strong enough to kill such insects. Proper covering at the surface keeps down the smell. The Committee saw many dumping grounds without smell or much flies. At a rubbish depot in Madras, the Committee saw the use of a machine known as 'Swingfog'. It is a small machine costing about Rs. 2,000. It is ignited by means of a battery and little petrol. The battery lasts for about six months. Some chemical is put into it and when the machine starts, it emits fog-like smoke which kills flies instantly. Madras has been using it since 1957 and there are three such machines. Udaipur in Rajasthan has still another method which is not expensive. After depositing refuse and night-soil in the trenches, it is sprayed with 'Gammoxine Powder' to kill flies. The apparatus used is very easy to work and costs hardly Rs. 15 to 20 each. The Committee recommends that *the use of swingfog or the gammoxine powder or any such other useful chemical must be made by all the local bodies.*

49. The conditions of workers at the dumping grounds are much harder than the conditions of scavengers. They have to work in most insanitary conditions without any protection. Some local bodies employ scavengers on daily wages paying them about Rs. 1.00 or 1.50 nP. daily. Such workers do not take much interest in their work, as they are not on permanent or long term employment. They are not provided with necessary implements etc., with the result that it makes their work all the more dirty. There are no proper arrangements for tilting the night-soil carts or tankers over the trenches. The heavy drums of night-soil brought on bullock carts or motor trucks have to be lifted and poured into the trenches and in this process, not only the carts and the ground, but the scavengers also get drenched with night-soil. Legs covered with night-soil up to the knee, hands up to the elbow are a very common sight. The clothes become dirty but the scavengers have to get on with those very clothes throughout the day. It is easier to handle night-soil tankers with pipes underneath them but it is generally found that the scavenger is not able to keep them in good conditions. The man on the tanker would simply turn over the knob allowing night-soil to pour in the trench at one place. After the night-soil is so spread, he puts a layer of refuse over it and levels it again with his bare feet. Some local bodies provide long handled rakes or spades but mostly he gets only a little broom. It is inhuman. In Delhi, labourers cutting grass or hedges have been occasionally seen wearing long gum boots but no scavenger is seen in long boots at the night-soil dumping grounds throughout the country, except at Salem in Madras State and Ujjain in Madhya Pradesh. Visakhapatnam in Andhra Pradesh provides ordinary shoes to workers at the dumping ground Vijayawada (Andhra Pradesh), Nasik (Maharashtra) and Madurai (Madras) provide chapals, and Bangalore (Mysore) military boots and socks. Socks get dirty immediately and cannot be kept clean. A few other

Swingfog

The Workers
at the Dumping
Grounds

municipalities informed us that they have made a provision for supply of boots to scavengers but the Committee saw none during the visits. The Committee feels that *long gum boots (up to the knee) are an absolute necessity for workers at the dumping grounds. They must be provided with gloves as well. An apron would also protect their clothes. Necessary tools like rakes with long handles and other implements for use should be given to the workers. The workers should be supplied with working uniforms and a headgear.* Many local bodies are content with giving an allowance of a rupee or so extra to workers at the dumping grounds. This however, does not meet the requirements as the workers do not buy any uniform with this sum.

Water Supply

Water supply at the dumping grounds is very inadequate even in towns which have sufficient water. No such provision has been made in many places. The vans, pails, drums etc., cannot be washed in the absence of sufficient water. The scavengers remain most dirty. As already pointed out in an earlier chapter, at several places, by the time the scavengers return home, there is no water in the taps. In towns with scarcity of water, water even for drinking purposes has to be brought by the scavengers themselves in earthen pitchers from long distances. Water is a sheer necessity for the dumping grounds as well as the workers over there. The Committee, therefore, recommends that *at all the dumping grounds arrangements for the supply of sufficient water for washing vans, pails etc., and for scavengers to take their bath and wash their clothes must be made. Construction of a few bath rooms would be very useful. For cleaning the vans etc., overhead water tanks and hoses can be more useful. The ground underneath should preferably be cemented.* At places, where water supply is scarce due to one or the other reason, the local authorities must endeavour to supply as much water as possible. Digging of a well at the site may solve the problem to some extent. In rocky areas, a well is not a practical solution. There the local bodies should make arrangements for bringing water in vans and storing it in overhead tanks etc. Somehow or the other, water must be made available at the dumping grounds. A very few local bodies supply soap to scavengers at dumping grounds or pail depots and generally a cake of soap a month is supplied. The Committee feels that *supply of soap at dumping grounds and also at pail depots is essential. Arrangements for liquid soap or soap cakes may be made wherever possible.*

Shelters at the Grounds

The scavengers have to work at the grounds in the open throughout the day and remain exposed to the sun and rains. To protect them particularly during their recess period, *Shelters may be provided at the grounds under which they may rest during sun or rain.* Other amenities like place for changing clothes, medical aid., can be considered wherever possible. This could be done at least by big municipalities and corporations.

Attachment of Agricultural Fields with Dumping Grounds

50. In some parts of the country, people are very orthodox and do not like the use of night-soil for manuring purposes and as such all the night-soil and refuse there go waste. In such places, the local bodies should give the lead. The use of night-soil as

manure is rapidly increasing and is very popular in most countries. Back-yard gardens for growing vegetables etc., are very common in other countries and the house-wives use the night-soil in their gardens. They do not mind carrying out the duties themselves. Why cannot we in India popularise the use of night-soil in our kitchen gardens? It would be advisable if the local authorities pay attention to this aspect of the problem. They should *attach agricultural fields to the dumping grounds. The manure prepared there may be utilised in those fields which would serve as a model to others.* It would also be a paying proposition to the local bodies. Some municipalities are already doing so and make good income from such fields.

51. A few local bodies, however, do not make proper use of the night-soil and refuse collected in their dumping grounds. They just leave the rubbish etc., on the grounds and allow it to go waste. Composting under such conditions takes much more time and in some cases takes as long as 9 to 10 months or so. The wiser local bodies prepare manure within 6 months or even earlier thereby making more output and income. *The local bodies right upto the panchayat level should therefore ensure proper composting in the shortest possible time.*

52. There are however, certain places where due to rocky or barren soil or some such other reason, use of compost in agricultural fields is out of question. Night-soil there goes waste. Agricultural fields in such areas are far flung. The cost of transportation of manure, if any, may in some cases be more than the price it may fetch. Wherever the cost of transportation proves more or in places where night-soil manure is not used due to prejudice, the possibility of installing gas plants may be considered. The Scavengers Living Conditions Enquiry Committee of Bombay State has mentioned about such a plant. It has been indicated that the Gram Laxmi Gas Plant was devised by Messrs Mapara Parekh and Company at Santa Cruz. The material used for the gas plant is cattle dung, but night-soil could also be utilised in the plant, with slight alterations, for production of gas which would be useful for lighting, heating and motive power. That Committee has seen the demonstration of the gas produced in the plant, heating a stove and working a small gas engine. If public latrines were so constructed in a village, with a population of say six to seven hundred people, that the night-soil, urine and ablution water would enter the special tanks built for the plant and a gas plant were set up, sufficient gas would be produced, for lighting all the public streets of the village. The contents, after yielding the gas which are thrown out at the other end do not lose their manurial value. The gas plants can be manufactured in different sizes and capacities and no expert mechanic is required to operate them. Gas plants had, by the time of the report of that Committee, been ordered by several institutions and the erstwhile State Governments of Saurashtra and Hyderabad. Members of the Barve Committee who had visited the gas plant felt convinced that it had great potentialities and after sufficient trial, it may prove capable of taking the place of septic-tanks yielding both gas and manure, useful to the people of the village.

Composting

The Gram
Laxmi Gas
Plant

The Barve Committee recommended to the State Government of Bombay that they may, through experts, examine the potentialities of the gas plant and recommend its use to village panchayats, if found suitable and useful. Such a plant can be made useful for the villages and in towns where there are no agricultural fields in the vicinity.

Cooperative
Society for
purchase and
sale of
manure

53. There is a Cooperative Marketing Society in Salem (Madras State) which purchases compost from the yard itself. Cooperative Societies for the purchase and sale of compost can prove quite useful and by themselves create enough public opinion for the use of night-soil manure. *The local authorities may consider the possibilities of establishing Cooperative Societies for the purchase and sale of compost. If cooperative societies of scavengers come forward they should be encouraged.*

Private
Dumping
Grounds

54. Scavengers in Punjab have claimed customary rights for cleaning latrines in certain localities and even over the disposal of night-soil. The demand for compost prepared from night-soil in Punjab has been on the increase and fetches good price. The scavengers do not permit local bodies to remove night-soil collected by them. They themselves lift the night-soil on donkey gangs or bullock carts and prepare the compost in their private dumping grounds. They have no proper implements, do not observe the rules of sanitation and work in any manner they like. Several scavengers share a dumping ground and prepare compost separately within that area. The passage to such grounds is normally common. Donkey gangs spill a lot of refuse and night-soil on their way to the dump in the streets and these are not cleared. This makes the entire place most unhealthy and insanitary. These scavengers do not wear gum boots or gloves etc., and actually work with bare hands and feet. There are no arrangements for washing and so on. This has to be stopped and things improved. The Committee feels that as it is essential to abolish the customary rights, it is equally essential that *no private dumping grounds should be allowed to continue. Cleaning of night-soil and refuse from the town and its proper disposal is the primary function and responsibility of the local bodies and should be well looked after by them. So long as customary rights are not abolished, the local bodies should ensure proper treatment of the night-soil at the private dumping grounds and efforts be made to improve the conditions of work and workers there. If necessary, bye-laws and necessary legislation for the proper maintenance of dumping grounds in the interest of sanitation should be passed and strictly enforced.*

The Committee has observed that though there are some bye-laws in the Municipal Acts for enforcing certain restrictions etc., these are rarely implemented. The authorities, due to one or the other reason show slackness and thus render the existence of such bye-laws nugatory. *There is great necessity for enforcing the municipal bye-laws and regulations more strictly.*

CHAPTER EIGHT

UNDERGROUND DRAINAGE

55. There are very few towns with an underground drainage system. On an average, only two or three towns in each State are having such a system and there too the coverage is partial. Wherever, there is underground drainage, it does not cover the entire town and hardly makes up for about 2/3rd to 3/4th of the municipal area. This needs extension. *At least in all the towns already having some underground drainage system, the local bodies should make serious efforts to extend the lines so as to cover the entire town.* As the towns are expanding rapidly it becomes more and more difficult to provide all the basic necessities immediately and particularly such amenities as laying of underground sewers which require huge amounts. However, the local bodies should make serious efforts to lay the underground sewers in all new colonies side by side with the provision of other amenities.

56. Some of the old towns are making use of underground 'nullahs' and using them as sewers. Bhopal is one such town. These 'nullahs' are inadequate to cater to the needs of the town and cannot be extended to new colonies. In Karnal (Punjab), the sewer line is so narrow that it is meant to carry only waste water and not the night-soil. Bangalore is having a sewer line which was constructed about 30 years ago. There are no drainage pipelines but a big covered drain has been constructed which passes from some parts of the city to its outskirts. The agriculturists whose fields lie on either side of the line have cut holes into it for taking out the affluent, sullage etc., for their fields. The line is leaking at all points. Due to continuous flow of water in the drain, sullage water remains standing in the fields and it has created a problem. It not only gives bad smell but helps in breeding mosquitoes. This drain ends up in a big pool of water. The trenches for composting are close to the pool. Water from the pool gets accumulated into these trenches and proper composting cannot be done.

57. Some municipalities make good use of underground sewerage system. They have put up sewage disposal plants which are quite costly. They utilise the sullage for manuring purposes and the affluent for watering the agricultural fields which have been laid out by them nearby, or supply it to agriculturists, as the affluent water has manurial value. Mysore, Patna, Bombay and Baroda are some of the cities which have done so. A few of the municipalities have put up sewage farms into which liquid sullage of the town flows without any treatment. Jaipur, Mysore, and Madras are some of them. Trivandrum is having a pumping station and the affluent is used for farming.

Sewage Disposal Plants

Madurai in the State of Madras has, however, surpassed all in this respect. It has the biggest sewage farm in India. This is a model farm and more than a lakh and a quarter of rupees has been their net annual income for years together from this farm. Their receipt from this farm have far exceeded the capital investment. A note received from the Commissioner, Madurai Municipality on this farm is given at Appendix VII. The Committee suggests that *other local bodies should follow the madurai experiment for use and disposal of sewage of their towns.* They should depute their officer to study the working of the farm at Madurai and adopt similar methods with improvements, if any, in their own towns. The main crop of sewage farms is 'Guinea Grass' which is used as fodder. It is easy and quick to grow, easily marketable, stands in the field for decades together and brings in very good yield. Besides, vegetables and fruits are also grown. Madurai is having fish ponds and introduced pisciculture as well. The Committee was told that there is no risk in growing vegetables on such farms provided vegetables grown on such farms are properly washed and cooked before use. This however, requires thorough investigation. The Committee suggests that *after consulting experts, growth of vegetables etc., on such farms may be encouraged.* Most of the sewage farms at present are run at a loss which could be avoided if the Madurai example is properly studied.

Financial Aspects

58. Underground drainage is the solution to most of the problems and it is essential that it should be extended as much as possible. The Committee feels that there is a need to have underground drainage system in all towns having a population of 50,000 or more within the next 10 years. Most of the money out of the allotment for the National Water Supply and Drainage Schemes is spent on water supply schemes and the small provision left for drainage scheme is inadequate consequent upon the drainage schemes remaining unheeded to. The Committee suggests that *a specific amount must be earmarked for the underground drainage schemes separately and at least 1/3rd of the total allocation of the national water supply and drainage schemes should be earmarked for drainage schemes.*

Grant of Subsidy

59. There are several towns with underground drainage schemes only on paper and with estimates of expenditure. Funds are not forthcoming. Such schemes are not workable without adequate subsidy from the Centre or the State Governments or both. These schemes are very costly and do not repay like the water supply schemes. A few States like the erstwhile Bombay provide more subsidy for such schemes. The Committee feels that *the Central Government must also give liberal subsidy to States. The Health Ministry may examine the possibility of such a provision under their Health and Sanitation schemes. State Governments which do not give any subsidy to their local bodies as yet must make necessary provisions for this purpose. The Central Government should ensure that subsidies to states and local bodies are properly ensured.*

60. There is another difficulty. Most of the house-owners do not choose to connect their private latrines even though the sewers have been laid down in their areas. Some municipalities have made obligatory provisions in their bye-laws for connecting the latrines with underground sewers and yet people do not pay serious attention to it. The Committee recommends that *in areas served with sewers, it should be made obligatory to connect house latrines with them. Defaulters should be dealt with properly.* There are, however, people who due to their poor financial position are not able to convert their dry latrines into water-borne ones and connect their latrines with sewers. Though they wish to do so, they are unable for want of funds. For such people, the Committee recommends that *loan/subsidy should be given to house owners according to income slab.* Orissa gives some rebate in house tax to people who convert dry latrines into water-borne. Nagpur Corporation provides a plan for flush-type latrine on payment of Rs. 10 and also a loan to those who are in need of funds. They make some provision in their annual budget. The loan advanced is recoverable within five years. For the conversion of dry latrines into flush-out latrines, the Kerala Government provides a loan to the Trivandrum Corporation at 5% interest, the Corporation advances loans to Cooperative Societies at 5½% interest and the Cooperative Societies provide funds to their members at 7½%. The advance of such loans is recoverable in 50 monthly instalments. The scheme is run on cooperative basis and the party wanting a loan must become a member of the Cooperative Society. Hyderabad Corporation in Andhra Pradesh also advances loans to parties for converting dry latrines into water-borne and the amount is to be re-paid in two years. Jaipur in Rajasthan has, however, a commendable scheme in this regard. They provide subsidy/loan to parties according to income slab :

Connections
with Under-
ground
Drainage
Conversion
of dry
latrines into
Water-borne

Subsidy

- (a) Persons with an income of less than Rs. 100 per month are entitled to get a subsidy (in kind of sanitary fittings) costing up to Rs. 60 for each latrine.
- (b) In cases of destitutes and widows whose income is less than Rs. 50 per month, sanitary fittings worth up to Rs. 100 can be given for each latrine.
- (c) In cases where any of the co-sharers of a joint property is a destitute or a widow, the entire cost of the sanitary fittings to the extent of such pauper's share shall be paid in full by the municipality.

Loans

- (a) Persons with a maximum monthly income of Rs. 150 or less, who cannot immediately pay the full cost of the flush latrine are eligible to get a maximum loan of Rs. 99 for each latrine.
- (b) Persons with a maximum income of Rs. 200 per month are eligible to get a maximum loan of Rs. 50 per latrine.

- (c) The loan will be payable in one instalment immediately after the plans for the sanitary fitting in question have been approved by the municipality.
- (d) Those who can return the loan within a period of three months shall not be charged any interest. In other cases, loan with interest @ Rs. 4 is recoverable in ten equal monthly instalments.

A copy of the scheme being followed is given at Appendix VIII. The Committee suggests that *all the Corporations/Municipalities/Local Bodies etc., should think over the problem of converting dry latrines into water-borne ones seriously and provide subsidy/loan to such of the parties as are in need according to income groups or in the light of local conditions. The Central Government should also give aid to the State Governments by giving adequate assistance to the latter in this matter. Wherever underground sewers have already been laid or are being laid, laterines must be converted into flush-out latrines and in places where flush-out latrines are not possible, latrines like septic-tanks, aqua-privies, etc., may be adopted. Such a step would go a long way in solving the problem of putting an end to the practice of carrying night-soil as head loads.*

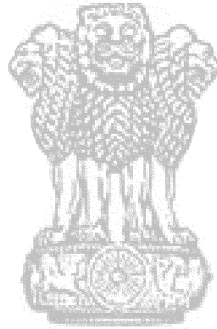
Rebate in Taxes

61. *The Local Bodies may also examine the possibility of allowing some rebate in house and latrine tax to such of the parties who may like to convert their dry latrines into water-borne etc. The rebate given now is insufficient but it should be raised so as to induce sufficient number of people to convert their latrines.*

Surface Drains

62. Most of the towns have open surface drains. These drains will continue to exist for a long time to come. Generally $\frac{1}{2}$ or $\frac{1}{3}$ rd of these drains are 'kuchha'. Some local bodies have no plans to make them 'pucca' in the expectation of having underground drainage which is not a practicable proposition in the near future. The condition of such drains is extremely poor at present. The Committee saw that in a good number of towns, the gradients of such drains are not proper with the result that water mixed with night-soil, rubbish etc., becomes stagnant breeding mosquitoes etc., and the cause of many diseases. Many dry public latrines are connected with surface drains. Urine, ablution water mixed with night-soil flows down these drains making the entire place unhygienic. Cess-pools are generally common along with surface drains. People misuse them. The persons living in upper storeys of the houses pour a bucket of water in their latrines washing down the night-soil which ultimately comes out in the street into the open surface drains. Scavengers, particularly woman scavengers, drain down a large part of the night-soil into such drains. Children are made to sit over these drains to meet the call of nature and there are similar ways in which these drains are misused. There is a need to keep these drains clean. In most of the towns, there are no arrangements for keeping these drains clean. Some have a few arrangements but inadequate. Only a few municipalities are trying to keep them in good condition. For cleaning,

some local bodies like Indore, Hyderabad, Delhi, employ a set of two persons—one for cleaning and the other for pouring water over it who is commonly known as 'Bhishti'—a man with a leather bag of water. The Committee suggests that *as long as surface drains exist, arrangements for keeping them clean should continue. A set of two persons—a cleaner and a bhishti—may be very useful. They should have proper implements with them. Wherever necessary, open surface drains should be covered. There should be a short phased programme to make surface drains pucca and at least by the end of the Third Five Year Plan, all the surface drains must be made pucca. These should be so constructed to enable the water to flow easily and not stagnate. Drains should be washed daily. The sullage water from drains can very well be utilised in agricultural farms. In towns where water supply is not sufficient, other arrangements for keeping the drains clean should be made.*



सत्यमेव जयते

CHAPTER NINE

DESIGN OF LATRINES

63. Effecting improvements in the collection of night-soil from service-type latrines greatly depends on the structure of latrines. The scavenger finds no difficulty in cleaning the flush-out, aqua-privy or septic-tank latrines but is not so in case of dry-latrines. As at present, the conditions of service-type latrines are most distressing and as long as such latrines are not remodelled on sanitary lines, it will be difficult to expect any spectacular improvement in the conditions of scavenging and correspondingly the hygiene of scavengers. People are still following the traditional methods and even in new model colonies where we expect flush-out latrines or at least latrines with septic-tanks, aqua-privies etc., the old type of latrines without water, proper drains, receptacles etc., are being constructed. Punjab is notorious for its dry-roof-latrines and in the model colonies visited by the Committee in Jullundur and Karnal, people are continuing to have roof-latrines even after drainage lines have been laid in the localities. In a few cases, the Committee saw septic-tank latrines or aqua-privies as well as the old type latrines in the same house. In most States, we found that people do not like to construct latrines at all in their houses as they seem to have some sentimental objections. In Rajasthan, for instance, it is primarily so. There, the people prefer going to the open fields or make use of the public latrines or just squat by the side of a public latrine, a drain or on the roadside generally after dusk or early in the morning or even during broad daylight but not have a latrine in their own houses. On an enquiry from the various local bodies, throughout the country, it could be estimated that the proportion of latrines to private houses is not more than 25% in urban and semi-urban areas whereas in the villages there are no latrines worth mentioning either public or private. This goes to show that the majority of urban people either make use of public latrines or the roads and as the number of public latrines also is totally inadequate to meet the demand, the entire locality is made filthy and insanitary. It is thus evident that the dimensions of the problem are prodigious. Even in advanced cities like Delhi children make use of surface drains for the purpose. Though in various municipalities there are bye-laws prohibiting misuse of surface drains, open grounds etc., as people have no latrines in their houses they are obliged to misuse these places. The Committee suggests that *people must be educated and persuaded to construct latrines in their houses. The Local Bodies should pass bye-laws for having latrines compulsorily and the plans for construction of new houses should not be passed unless and until there is a provision for a sanitary latrine. Bye-laws should also be passed for compelling owners of the existing houses which are without latrines to construct latrines.*

This is likely to take some time and in many cases, construction of latrines may not be possible due to lack of space or some other reasons. As long as this position continues, the people will continue to make use of public latrines or open streets. Besides, almost in every town there is some floating population or pavement dwellers, rickshaw pullers etc., who have no other place but a public latrine to ease themselves. The number of public latrines as at present, in all the towns, is very inadequate to meet the load. The Committee suggests that *the number of public latrines should be increased keeping in view the demand for them. In places of congestion where these are needed the number of latrines should be increased.* The local bodies complain that public latrines cannot be constructed in congested places as it is difficult to acquire building sites in such places and moreover people of the locality always object to the construction of a public latrine near their places. This however, the Committee feels, depends on the way the local bodies handle such situations. Any intelligent move in this regard is bound to bring in the desirable success. Madras has set up a very good example in this regard. In the busiest square at Roundtana, the Corporation has constructed an underground public latrine. This is located at the cross-roads of a very busy thoroughfare. The latrine is covered with a beautiful fountain over it. The passers-by cannot imagine that underneath the fountain and at such a busy place there could be a flushout public latrine which had been constructed about 12 years before. This is a very clean latrine and caretaker who is a retired Corporation employee remains there on duty and charges half an anna from every user. This example should be copied and the Committee feels that such underground latrines should be constructed in market places, bus stands, railway stations, schools, cinema halls, public gardens and other places of amusements etc., and kept clean by a caretaker.

64. Whereas the structures of some public latrines as the one above are quite good, the majority of them are very crude and outmoded where perforce, the scavenger has to collect night-soil in insanitary methods, in which process his body and particularly his hands upto the elbows are covered with night-soil. During the course of our visits, the Committee came across different types of latrines both public and private some of which may be described here briefly. Before taking up the question of private latrines, we would like to describe the public latrines which are the responsibility of local bodies and can be remodelled easily, expeditiously and serve as models to the public.

With the exception of very few latrines almost all the public latrines in the country are dry and the scavenger has to clean the night-soil as is done in private houses. Most of the latrines have no receptacles and wherever any are provided these are either crude drums without handles varying from 5 to 10 gallons capacity, or the baskets. Some local bodies have provided buckets under the seats but the number of such local bodies is very limited. The very common type of public latrine has tin-sheets around the seat. The side-walls do not touch the ground and

Public
Latrines

remain about 1 to 1½ feet above the ground level resting on four iron poles. In some cases down below are kept the drums, or baskets but normally night-soil drops on the bare ground. These drums overflow with night-soil, urine and ablution water and the entire place is filthy. People do not mind throwing 'bidi' buds, stones, rags or broken earthen pots etc., in these drums while easing. Sometimes these latrines are constructed on a raised platform.

The other type of latrine which is quite common in the States of Rajasthan, Bombay, Mysore, Andhra Pradesh, Madhya Pradesh etc., is the one connected with cess-pools. Two rows of raised seatings back to back with a small gully of about 1½ feet or 2 feet in between and to be cleaned from the back is the common form. There are no receptacles in such latrines and the human excreta drops directly on the ground which has a slope backward. With the sheer force of gravity and ablution water etc., night-soil slopes backward into a drain in the gully. All the seats on both sides of the rows have trap doors for cleaning. The scavenger who is usually a woman has to enter the gully, clean the latrine seats with a little 'jharoo' or spade, wherever it is provided. The drain in the back gully leads to a cess-pool. The scavenger has to collect the night-soil from the drain itself or it flows into the cess-pool to be cleaned with the help of bucketfuls. The scavengers are always bare-footed and in cleaning such back gullies, get completely soiled. Such primitive latrines have to be demolished forthwith.

In many towns, public latrines are constructed just over a 'ganda nullah' or by the side of one. No water is used in such latrines and it is only the urine and ablution water that help in the flow of the human excreta towards the 'ganda nullah' if the latrine is by its side or it drops just into it if located over the 'nullah'. At several places, two steps are provided over a simple drain which leads to a cess-pool and the scavenger has to drag out the night-soil that gets stuck up in the drain. Pigs have easy access to all such latrines and make the best use of them. There is no barricade to stop them. The pigs even try to push away persons easing in such latrines and prove a great nuisance particularly for children and women.

In some parts of the country the Committee saw the 'Enclosure Type Latrines'. These public latrines are open to sky and have an area of 50 square yards or so. There is a wall enclosed on all sides about 5 feet high and a small entrance without a door but a cover wall. There are no seats or steps. Sand is spread on the open ground and one has to sit over it. Inside the enclosed wall there is no privacy of any kind and as many as 20 to 40 persons sit at a time. Every body has to sit facing one or the other. Urine and ablution water make the place slushy and it is a problem even to enter such public latrines. The scavenging is done by pigs loitering about and what is left if any, is removed by scavenger. There are separate latrines for men and women.

There is another type of latrine which the Committee saw in certain parts of the country. Latrines' grounds have backward slopes and there is no receptacle etc. The excreta slopes down backward where sand is kept. The back-side is covered with a wall about 4 to 5 feet high with an entrance on a side of it. The scavenger has to go inside the back compound of the back-yard and collect night-soil that gets mixed up with sand. Though night-soil is collected there is no proper arrangement for washing or keeping the back-yard clean. One local body constructed a public barrack-like latrine with two sets of about 13 seats at the back of each other, one for men and the other for women. In latrines for women there are no walls in between the seats and one has to sit side by side. There is no privacy at all. The seats have back openings and there are no receptacles. The women scavenger has to clean the seats and the back drain with the help of a little 'jharoo' and basket. The Committee also saw latrines with a drain underneath the seats. At the head of the latrines there is provided a small water tank. The drain leads to a cess-pool. After use the scavenger or the user pulls a lever attached to the water tank and water gushes out taking away the human excreta from underneath the seats to the cess-pools. This however, does not keep the drain clean. The night-soil remains stuck up here and there and gives a stinking smell. Attached to some of the public latrines are big cess-pools which are used as storage tanks for night-soil. The scavengers from nearby houses bring in the night-soil and deposit it into those cess-pools which are ultimately emptied with buckets.

Some of the public latrines are quite big and at the same time dark. There are no arrangements for lighting and if there had been any the bulbs would invariably be missing. In Lucknow while visiting a public latrine, the inhabitants of the area complained that due to darkness in the public latrines, there had been instances of molestation of women. This is a neglect on the part of the local authorities and they could very well provide necessary lighting arrangements and wherever these have gone out of commission, this could be replaced without much difficulty.

65. The Army in Jabalpur Cantt. have set an example in the construction of good service-type public latrines. They have made them fly-proof. These are service-type latrines and have two buckets under the seats — one for the night-soil and the other for urine and ablution water. It facilitates the work of the scavengers. These latrines are all pucca masonry work with pucca roof, walls, doors with automatic shutters and all the openings are covered with wire netting and flies cannot enter therein. Two sets of latrines at the back of each other have a gully in between for cleaning. The whole unit is pucca and covered and kept quite clean. The Committee suggests that *as long as all the public latrines cannot be converted into water-born latrines these should at least be made fly-proof, this would also prevent pig entry.*

**Fly-proof
public latrines**

**Water-borne
Latrines**

66. The Belgaum municipality (Mysore State) at Kasai area, has introduced another system in place of septic tank. There are two seats in public latrine connected with 2 tanks (like reinforcement concrete pipes) about two feet in diameter. There are two chambers in each of these two tanks. Affluent flows with water into the first chamber and then into the second chamber where filtration takes place. Then the filtered water is collected in the other tank which flows out into the street drain. Each tank costs Rs. 400. These are ready-made tanks and have only to be brought to the site. The two tanks and the super structure of the latrines where flush-seats are provided in all costs Rs. 1,500. This appeared to be quite good. The tanks can be cleaned periodically.

67. In the beginning of the chapter, we referred to the public latrines with overhead fountain at Roundtana in Madras city. The Committee saw Madras Corporation's public conveniences at George Town, Netaji Subhash Road also where there are flush out latrines, though the flush was out of order at the time of the Committee's visit. Besides flush latrines, a wash basin has also been provided. The user has to pay half anna to the caretaker for using latrines at the first floor. There is another set of flush-out latrines on the ground floor which can be used without payment. The caretaker is a retired person whom the Corporation pays Rs. 5 per month besides the income of half anna per user which he collects. He ensures the sanitary condition of the latrines. The caretaker informed the Committee that he earns about Rs. 3 to 4 every day which is a good income after retirement. The Committee was informed that there are about 460 flush type public latrines in Madras city. This is a commendable example.

In Simla, the Committee saw some latrines on the Mall Road. Some of these latrines are flush-out latrines where after the use, the user has to pull the chain. There is one flush-out latrine the use of which could be made by inserting an anna coin. The door opens and the user enters. There is also a dressing room. Previously, another automatic machine was kept from which one could get a towel after inserting two annas coin into the machine. This arrangement could not work as the public used to carry away the towels with them.

Some of the different types of public latrines seen by the Committee at various places have been described above and now it is for the State Governments and the local bodies to remodel their primitive latrines and convert them into more sanitary types. The Committee suggests that *all the State Governments and Local Bodies should give serious thought to the models of public latrines. Primitive latrines must be remodelled and more sanitary latrines adopted. As far as possible, public latrines should be water-borne with arrangements for the automatic flow of water after periodical intervals. Public latrines should be constructed in the most crowded localities and places within easy reach of the public. Latrines constructed at remote or far off places are not likely to be of much use and wherever these are*

used these are misused. Wherever possible they should be built on a large scale underground.

68. Just as there are various types of public latrines, similarly, there are strange types of private latrines. The very common type of latrine is 'Khuddi' type latrine as seen in the Northern parts of the country. 'Khuddi' type latrines are not strictly confined to Northern India alone but can be seen in some parts of Orissa and Andhra Pradesh also particularly in Hyderabad. The Committee, after visiting different States, has come to the conclusion that majority of the people do not keep any pan or any other type of receptacle under the seat and the human excreta drops directly on the ground wherefrom it has to be collected by the scavenger. In some latrines people try to provide a sort of receptacle which is either a bamboo basket, a drum, an earthen gamla, kerosine-tin or a wooden packing case etc. These are the receptacles used for the night-soil as well as for urine and ablution water. A few local bodies have tried to introduce pans made of M.S. sheets etc., but these are not on a large scale.

Private
Latrines

In Punjab, latrines are mostly constructed on the roofs of the houses. The scavengers 90% of whom are women, have to go up steep and dark stair-cases or the wooden ladders without handle-bars and come down balancing the load of night-soil on their heads with the implements used for cleaning in their hands. Women scavengers find it very trying and troublesome particularly during the days of their pregnancy or sickness. Sometimes, they carry their little infants also along with them. There are houses in Punjab where one storey belongs to one owner, the second to another and the third to still another, and so on. All the flat-owners have their latrines on the roof of the house. The roof-latrines are generally open to sky and exposed to sun and flies etc. These are all service-type latrines and mostly without any type of pan under the seat. These are not washed properly and whenever these are required to be washed, the scavenger has to bring up a bucket of water from down-stairs. The scavenger generally carries night-soil in a bamboo basket or a 'tasla' which goes on trickling and spilling all through the stairs etc. Due to location of latrines on the roof bad smell is always there in the air and in summer the people also have to sleep on the roof. The Committee feels that *as long as roof-latrines are there, carrying of night-soil as head load cannot be abolished as this is the only convenient manner of bringing night-soil from roofs. Roof-latrines should be brought down. Bye-laws should be framed and strictly enforced to ensure that in all new buildings no roof-latrines are allowed. Efforts should be made through legislation or persuasion to bring down roof-latrines and wherever space is available sanitary latrines constructed. Otherwise standardized receptacles should be made use of. Even roof-latrines may be converted into water-borne ones and connected with underground sewers where such sewers exist or to septic-tank which could be constructed on the ground-floor.* In some of the localities like Amritsar, there is no space for construction of septic-tank or aqua-privy latrines on

Roof-Lat-
rines.

the ground-floors. Even for the construction of drainage pipes, there is not enough space in most of the localities. There is not much space even for laying underground drainage pipes and at some places wherever these have been laid, people do not connect them to their latrines. The Committee feels that *wherever possible, flush-out latrines should be taken up but in cases where there are no underground sewers, the possibility of constructing septic-tanks may be considered. Roof-latrines can be connected with septic-tanks which can be constructed on the ground-floor. Where there is no space on the ground-floors, septic-tanks may be constructed on cooperative basis at any available place in the street or where possible, just under the street itself and three or four houses or so may connect their latrines with them. These tanks require to be cleaned once or twice a year. Local bodies can help in keeping the septic-tanks clean periodically. The affluent from the septic-tanks can flow into surface drains as it is harmless.*

The most insanitary and barbarous types of latrines are those where in the scavenger has to crawl through the long narrow dark passage pushing the basket with one hand resting his body weight on the other and make his way upto the latrine chamber, clean the seat and return back in the same manner. These latrines are commonly found in Bihar and Gujrat particularly in Surat.

In most of the States, latrines with two chambers are very popular. The squatting chamber which the user enters is located in the interior of the house whereas the entrance to the receptacle chamber which is accessible for clearing the night-soil is located outside the house the opening of which is from the street alongside the main entrance. In Rajasthan, the latrines are so constructed that the scavenger has to thrust his hand inside the chamber through a narrow opening and in latrines where the seat is much farther inside, he has to stretch his hand to the maximum and thrust his head too inside the hole to see and do cleaning.

The latrines with trap doors are again very common. The traps of the back opening are generally damaged and never replaced. There being no receptacles and the opening being too narrow, scavenging becomes very difficult. Pigs are always present in such latrines. Latrines with cess-pools are quite popular. Night-soil mixed with urine and ablution water flows down through open drain into the cess-pools which in many cases have no further outlets and have to be cleaned with the help of buckets. In some places, latrines are constructed over small drains with a slope in the seat towards these drains. The scavenger has to collect night-soil from these drains which are never cleaned properly. In several towns, Committee saw latrines with approach through back gullies. The user enters the squatting chamber from the interior of the house but the scavenger has to reach the latrine seat through the back gullies which are most dirty, full of night-soil flowing in the drains and rubbish etc. In many cases, the gully extends long covering many houses and the scavenger has to clean all the latrine

seats one after the other. The space is so narrow that none other than a pig could enter but a scavenger must. In several towns in Uttar Pradesh, like Jhansi, Lalitpur and Agra etc., latrines are constructed on the upper storeys of the houses. The night-soil drops down from the upper storey to the ground floor where there is provided a small chamber with an opening for cleaning. No receptacles are provided in such latrines and while dropping, night-soil besmeareds not only the side-walls but the entire chamber down below also. These can never be cleaned and the stink is always there. Such latrines are found in Rajasthan also. Rajasthan is again known for its 'Anankar Jajroo' latrines. Such latrines built on upper flats are connected with about 3 inches pipes so often made of clay which lead down to the ground-floor. Night-soil drops down through these pipes. In many cases these pipes are not straight but have bends here and there with the result that the dropping is also not proper. Night-soil gets stuck up all around the pipes which are not cleaned unless there is actual clogging. Latrines in several towns are divided into categories 'A', 'B', 'C', etc., according to their constructions. Just as in Udaipur, they have divided latrines into three categories viz., 'A', 'B', and 'C'. 'A' is improved type, 'B' has a trap door system and 'C' has a basket and very small in size where practically there is no space. In Hyderabad city, pit latrines are quite popular. These are 'Khuddi' type latrines connected with a pit underneath. Night-soil mixed with ablution water etc., goes on accumulating there and is cleaned once in eight or nine months. However, almost in all the latrines seen by the Committee, it appeared that they are very much neglected and remain clogged. So often, the night-soil has to be pushed down into the pit with great difficulty by the user. Scavenging is not done in those areas. For cleaning these latrines, one has to pay about Rs. 8 once a year or so. In Hyderabad again there is another 'Khuddi' type latrine. The steps are 3 feet high or so and are constructed facing a side-wall. In front of the steps there is a small drain. The entrance opens on the side of the steps and the user has to step upon the 'Khuddi'. It is very difficult to clean the seats. There is no space for the scavenger for cleaning and he has to thrust his hand from the siding of the 'Khuddi' and take out night-soil in which process his hands cannot escape becoming dirty.

The conditions of latrines in Harijan Colonies which are close to the 'basties' are most distressing and need immediate attention of the local bodies who should ensure their regular cleaning. In hilly areas so often, houses are constructed near the ravines or deep 'khuds'. The opening for latrines are kept towards the 'Khuds'. Narrow long wooden planks are placed resting on the siding of the latrine and the road on the opposite side. The scavengers have to walk over these wooden planks and there is always a danger of their falling in the 'Khuds'.

69. The Committee feels that *all these primitive types of latrines have to be demolished. As long as these continue, no improvements in the scavenging conditions can be expected.*

For remodelling such latrines, not only legislation but persuasion also would be required.

**Types of
Improved
Latrines**

70. During the course of visits, the Committee came across various types of improved latrines which have one or the other advantage. Every type of latrine may not be suited for every town. This will depend on the conditions prevailing locally. The names of few of such latrines are given below :—

- (1) Flush-out Latrine.
- (2) Automatic Flush-out Latrine.
- (3) Septic-Tank Latrine.
- (4) Aqua-Privy Latrine.
- (5) Leach Type Latrine.

It is suggested that the local bodies should consider this aspect of the problem seriously and adopt the type of latrine they feel can be best suited to their towns. Many of these latrines have some defects too but the local authorities should think over them and try to overcome the difficulties by improving thereon.

**Latrines on
Market and
Festival Days**

71. In several towns markets take place on certain days when large crowds gather there. No special arrangements are made for providing latrines for people there. The Committee suggests that wherever markets or fairs are held regularly, permanent latrines should be provided which should as far as possible be water-borne failing which any other improved type of sanitary latrine should be provided. Where receptacles are provided, their sizes and proper arrangements for keeping them clean must be specified. Extra scavengers should be provided on market days. Where however, markets are held after long intervals and where providing of permanent latrines is considered difficult, temporary latrines of improved type and arrangements for extra scavengers should be made. The same arrangements should hold good on occasions of festivals.

72. The problem of scavenging is predominantly there in the urban areas and not so much in villages where people use the open fields. However, we have to inculcate the latrine habit in them too. The Committee suggests that latrines should be introduced in villages also progressively and stop the present indecent and insanitary practice of easing everywhere. It is indecent to observe a large number of people squatting all along the railway lines etc. The Directorate General of Health Services and the National Buildings Organisations have examined the problem in an expert manner and have made some very useful suggestions in regard to the construction of latrines in villages. These are reproduced for the benefit of all concerned at Appendices IX and X.

Other types of latrines have also been evolved for rural and semi-rural areas which are as follows :—

- (1) 'Kutchra' Trench Latrine.
- (2) 'Pucca' Trench Latrine.
- (3) Bore Hole Latrine.
- (4) Gopuri Latrine.
- (5) Dhanoli Type Latrine.

CHAPTER TEN

LATRINES ON RAILWAYS

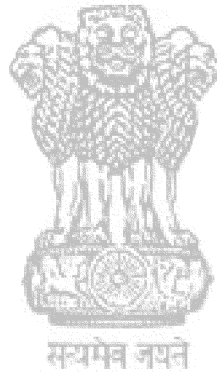
73. Consequent on the recommendations contained in Chapter I(b) regarding conditions obtaining in sanitary conveniences in the Report of Raman Committee on Health, Hygiene and Sanitation in M. & S.M. and S.I. Railways, the Ministry of Railways advised all the Railways that wherever piped water supply is available or can be made available conveniently and at reasonable cost, they should provide septic-tank flush type latrines for upper class and third class waiting halls and platforms. A copy of the Railway Ministry's letter No. 55/W/2/80, dated 22-10-55 together with the decisions of the Railway Board on the recommendations made by the Raman Committee in this regard are contained in Appendix XI.

74. The Committee, however, during their tours observed that whereas in case of big stations, dry latrines are being converted into water-borne ones, the position still remains unsatisfactory at majority of the stations. On the platforms and in waiting rooms, there are dry-latrines whose maintenance is far from satisfactory. Receptacles under the seats are overfull and are not regularly cleaned. In many stations there are receptacles and night-soil drops on the floor and is removed in the same primitive manner as elsewhere. Moreover, the number of seats provided is totally inadequate for the demand.

75. The recommendations made by this Committee for the removal of night-soil, providing of receptacles under the seats, conversion of dry latrines into water-borne or other sanitary type latrines may under a phased programme be adopted by the Indian Railways as well. The latrines at the stations are used by a large number of people many of whom might be suffering from infectious diseases. There is therefore, greater need for providing improved type of latrines at these places preferably of the type where water flows automatically every few minutes.

At so many stations, latrines are open to sun, rain and flies etc. The receptacle chambers are invariably left uncovered and have no trap doors. Privacy is also not ensured and at many stations there are no doors. Pigs have easy access to them. Though at a few big stations there are arrangements for keeping the latrines clean, what the Committee has seen in most places the conditions are bad and their continuance in this state will not bring good name to the Railways. It would be desirable if the Railways could construct fly-proof latrines a sample of which has been seen by the Committee at Jabalpur Cantt. built

for the Army with improvements therein. The Indian Railways which provide for the convenience of millions of passengers all over the country have the resources and the technical talent to provide an abject lesson to the whole country in the matter of construction of various types of sanitary latrines. This would not improve the sanitary conditions on the Railways but also play a great psychological role on the minds of lakhs and lakhs of people who see and use them daily throughout the country.



CUSTOMARY RIGHTS

76. One of the obstacles to the municipalisation of scavenging service is the existence of certain Customary Rights known as 'Gharaki, Gharagi, Jagirdari, Jijmani, Dastoori or Virat' etc., jealously guarded by some of the scavengers. The 'Gharaki' system whereby the scavengers have acquired a hereditary right to clean latrines in private households or localities exists particularly in the State of Punjab, Rajasthan, Madhya Pradesh, Uttar Pradesh and Delhi. Leaving aside the localities the scavenging of which is the responsibility of the local bodies or a few areas where such rights did not come into existence due to one or the other reason, the scavengers doing cleaning work in private households either on their own or under the employ of some other scavenger have come to possess these rights according to which they retain, sell or mortgage the rights in the same manner as one does with his property. With the expansion of villages and towns, scavengers appear to have divided the sectors amongst themselves for cleaning purposes and each one of them became entitled to receive some remunerations which were then paid mostly in kind and occasionally in cash. Economic considerations, however, changed the outlook and people started thinking more in terms of cash than in kind though even now, grain, food, clothes etc., are commonly given to scavengers. Rigidity of caste and enforcement of rules on scavengers turned the profession of scavenging into a sort of monopolistic profession and gave rise to the problem of customary rights, and they started considering particular streets and localities as their private properties in so far as the scavenging was concerned. The local bodies who should have municipalised these functions also allowed the hereditary scavengers to continue their work in their customary localities assuming for themselves the charge only of cleaning and sweeping the public streets, lanes or public latrines etc. However, in States or towns, where the scavengers had not exercised their rights, the scavenging service came to be municipalised and there are no such customary rights in existence.

77. The continuance of customary rights have taken a very ugly turn and now the customary scavengers carry on the duties of scavenging as they like and dispose of the night-soil in the manner they prefer to choose. The position is worst in Punjab and Western parts of Uttar Pradesh where the local bodies are not allowed to collect even the night-soil left over in the street corners by the private scavengers.

The Gharaki rights are of two kinds :—

- (1) Rights for cleaning latrines in certain private households or particular localities.
- (2) Rights for the sale and disposal of night-soil collected by private scavengers.

The night-soil collected by private scavengers is considered to be their property in Punjab and in the Western Districts of Uttar Pradesh. In the Eastern districts of Uttar Pradesh and other States, whereas the scavengers possess rights for cleaning latrines in certain localities, they have no rights over the possession of night-soil which after collection becomes the property of the local body and disposed off in the manner the local body deems proper.

78. All the scavengers working under proprietary rights do not benefit from the continuance of such rights as most of them work under the employ of a man who has assumed the role of a 'Jagirdar' and gets the latrines cleaned by others whom he pays certain nominal amount agreed upon. He himself would not do scavenging work. All the income, from the 'mohalls' under his jurisdiction comes to him. The Committee has seen several such 'Jagirdars' who have grown rich, live in good houses and enjoy modern comforts. The real worker working under him, however, remains at the lowest rung of the ladder cursing his fate and clientele. He is not at all happy about his conditions of work and wages earned. He knows that the house-owners cannot turn him out and as such neglects his duties, does not clean the latrines properly, throws the night-soil in the surface drains, deposits it in street corners and frequently quarrels with the house-owners. Neither the house-owners nor the scavengers are happy over this but things continue somehow or the other. Public opinion is quite clear about the abrogation of customary rights and municipalisation of scavenging. During the visits, the Committee had frank and free discussions with the scavengers, representatives of their unions, public men and the officials and it was gathered that the general opinion is for the abrogation of these rights though some of the 'Jagirdars' of these scavengers whose interests will be affected adversely in the event of municipalisation have put an opposition to such a move. At many places the Committee noticed that the public health officers have felt helpless as they cannot carry out their official duties without their goodwill. This leaves a very wide gulf between them and the conditions in the towns where the scavengers possess these rights. Proper maintenance of the conditions of sanitation and keeping an eye over the health and hygiene of the towns is a primary responsibility of the local bodies and a few private scavengers and their 'Jagirdars' should not hold the community to ransom. The Committee is of the firm opinion that *the customary rights must not in any case be allowed to continue but be abrogated immediately*. We cannot expect any improvements in the methods of scavenging or think in terms of putting an end to the practice of carrying night-soil as head loads or improve sanitary conditions of the towns as long as such rights continue in a large part of the country. The mere promulgation of municipal bye-laws to carry out the duties of scavenging in a certain way will not carry us far. Such bye-laws are already there in the Municipal Acts of many municipalities etc., but are never enforced or cared for as the private scavengers have control over the situation and the bye-laws have been virtually rendered infructuous.

79. The private scavengers have represented that as they depend entirely on the income, food or clothes etc., which they get from house-owners, they would be rendered jobless and have to face unsurmountable difficulties in the event of municipalisation. They therefore, desired that (i) as far as possible all the 'Bhangis' who may suffer on account of abrogation of customary rights, should be employed by the municipalities etc., and that they should be taken as full time workers and not as part-timers, (ii) they should be paid wages according to the Minimum Wages Act, and provided with uniforms and other kits etc., (iii) their hours of work should be restricted, amenities like proper housing etc., be provided, and that (iv) local bodies should give adequate compensation in cash to such of the persons who do not get municipal employment.

80. The municipalities have also explained their difficulties. According to them (i) in case of municipalisation of scavenging work, there may be strikes, which will cause inconvenience to the community, (ii) most of the municipalities are not financially sound and therefore may not be able to pay compensation, (iii) the number of private scavengers in most of the towns, is comparatively more than the municipalities may need for running the services efficiently and as such, it may not be possible to absorb all the scavengers who may be rendered jobless, and, therefore, desired that it should be within the discretion of the municipalities to employ such of the persons whom they consider suitable.

81. The Committee feels that none of the reasons are strong enough to prove a bottleneck in the way of the abolition of customary rights.

82. Some of the State officials felt that the customary rights should be abolished without paying adequate compensation. Others feel that the 'Jagirdars' who contribute nothing, had never acquired these rights as they have all along been acting as parasites on society and as such do not deserve any compensation. The Committee feels that as far as possible such 'Jagirdars' may be employed as sanitary 'maistries' to supervise the work of scavengers and as many private scavengers as possible should be taken in municipal service. The additional expenditure on municipalisation could be met by either introduction of scavenging tax which is not there in many municipalities or increasing the existing scavenging tax.

83. Regarding the right for the possession of night-soil by the scavengers, the Government of Uttar Pradesh feels that the night-soil collected by sweepers whether municipal employees or customary, once deposited at a place that may be specified by the municipality for the purpose, becomes the property of the local body and the sweepers cannot legally claim any right on it. Some of the sweepers contend that they have been enjoying proprietary rights over the night-soil collected by them from private houses for a long time and the law should not override the custom. In this connection, the Government of Uttar Pradesh feels that the fact that sweepers in certain places have been appropriating to themselves the night-soil collected by them for a long period

makes no difference in the legal position. All persons can by rules be enjoined to deposit night-soil at a place specified by the board and they will have to comply with the direction. If a custom is found to be against the public good, it cannot be continued as of right. Customs which are against public good or contrary to public morals and sense of decency or which are inconsistent with any previously established customary rights or have provoked strife or difficulty, are *per se* void. A copy of an order No. 10118/XI-A-15(57)/52, dated 15th September 1952, issued by Uttar Pradesh Government, in this regard will be found at Appendix XII.

84. The Committee understands that several cases about the customary rights have gone upto Law Courts particularly in the States of Punjab, Uttar Pradesh and Gujarat and these had been upheld by them. The Committee feels that the question of the acquisition of customary rights attracts the provisions of Articles 31, 41 and 42 of the Constitution of India.

Article 31 of the Constitution reads :—

“31(1) No person shall be deprived of his property save by authority of law.

(2) No property shall be compulsorily acquired or requisitioned save for a public purpose and save by authority of a law which provides for compensation for the property so acquired or requisitioned and either fixes the amount of the compensation or specifies the principles on which, and the manner in which, the compensation is to be determined and given; and no such law shall be called in question in any court on the ground that the compensation provided by that law is not adequate.”

“Clause (5) of the same Article provides :

Nothing in clause (2) shall affect—

* * *

(b) the provisions of any law which the State may hereafter make—

* * *

(ii) for the promotion of public health or the prevention of danger to life or property.”

* * *

Article 41 of the Constitution provides :

“The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want.”

Article 42 reads :

“The State shall make provision for securing just and humane conditions of work and for maternity relief.”

85. There is much scope in these Articles and the State Governments can make good use of them. However, in order to settle the persons who may be affected by the abolition of customary rights, the Committee feels that their loss must be made good by one way or the other.

The Committee suggests that *the municipalities/other local bodies etc., should pay reasonable compensation in cash to such of the scavengers who might be affected and do not obtain employment due to acquisition of their customary rights. But it is well known that many of the local bodies will not be in a position to pay reasonable compensation. It is necessary that the Governments at the Centre and the State should come forward to finance such of the local bodies for the purpose.*

86. Most of the scavengers who get very little remunerations from private houses under customary rights are prepared to take up municipal employment. Under municipalities, they get more pay, summer and winter uniforms, quarters, leave etc., and be also entitled for an off-day in a week. These benefits are denied to the private scavengers. The Committee suggests that *wherever cash compensation is not possible, or the local bodies cannot offer employment under them, the affected scavengers must be taken in other municipal services.*

87. However, the question remains that in many cases it would not be possible for the local bodies to employ all the scavengers who may be thrown out of their work. It should be the sincere efforts of the local bodies to employ as many scavengers under them as possible. There are several departments under the local bodies like water works, electricity and sewage disposal plants, etc., under which the affected persons can be provided with some jobs. Then there are the posts of peons, 'chawkidars', 'naka-dutiwalas' etc., which can be filled up by giving preferential treatment to such persons. The Government of India have been giving grants for the welfare of Scheduled Castes under the Centrally Sponsored Programme and the State Plans. Such grants should be made good use of for the welfare of scavengers. They can be given vocational training. After training, some subsidy or loan to be recovered in easy instalments, can be given to them for settling in trades. Cooperative Societies can prove very useful for them.

88. In many towns where there are customary rights, there is no scavenging cess. The house-owners have to pay to the scavengers and can very well pay to the local bodies also if scavenging service is municipalised. The Committee, therefore, suggests that *in places where there is no scavenging cess, such a cess should be levied and the scavenging service municipalised.* The cess should be so adjusted that the scavenging service may become almost self-supporting. By municipalising the scavenging service, the conditions will improve a great deal.

Scavenging
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89. For the acquisition of customary rights, there may be need for passing necessary legislation and taking other steps to rehabilitate the affected parties. The local bodies, however, find

it very difficult to take any initiative from their sides. The Committee feels that *it should be the duty of the Local-Self-Government Department to initiate necessary legislation for the acquisition of customary rights from scavengers. They should handle the problem at the State level through their legislature and ensure that a uniform policy is adopted by all the local bodies and fully implemented.*

90. Conditions differ from State to State and from town to town within a State. Somewhere mere municipal employment may be sufficient but at other places, cash compensation may have to be paid and at some other places, other difficulties may crop up. To overcome all these difficulties, the Committee suggests that *all the State Governments and Union Administrations should appoint Small Committees to go into the whole question of the abolition of customary rights. They should not merely study the legal aspects of the problem but go thoroughly into other problems as well connected with it. They should draw up a phased programme for the abolition of customary rights and see that the work is completed as soon as possible but not later than a fixed target date. They should determine the basis, mode of payment, and the amount.*

91. Since the problem is a difficult one, it requires tactful handling. Negotiations and mutual agreements between the local bodies and the scavengers can bring in the desired effects. The local authorities would be well advised to tackle the problem in a friendly and persuasive manner. They should also enlist the co-operation of non-official organisations and social workers interested in the welfare of scavengers.

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CHAPTER TWELVE

METHODS OF SCAVENGING IN FOREIGN COUNTRIES

92. The Committee did not have time or the opportunity of visiting some foreign countries where the problem of scavenging still exists. The Ministry of External Affairs were, however, good enough to help the Committee in this regard in the collection of information on the prevailing conditions from 18 Indian Missions abroad.

The Committee have no comments to offer on these reports. The conditions of scavenging etc., in some of the towns of those countries as reported by the Missions are briefly, as under :—

93. 1. *ADEN*

For removal of night-soil, two methods are in operation in Aden. These are (a) dry method, and (b) wet method.

(a) In dry latrines, human excreta and urine are not allowed to get mixed. At appointed hours every day, the municipal scavengers come and collect night-soil in municipal motor vans which are fitted with covered box-like structures. After collection, night-soil is taken to a place called 'Khusaf' and burnt in incinerators. The system of carrying night-soil as head load is unknown.

(b) Flush system also known as wet method is becoming popular. The night-soil and urine etc., is flushed away through sewers and disposed off in the sea.

The scavenging class come from Yemen and are called 'Zabidis'. As far as pay and accommodation are concerned, the conditions of this community are same as those of peons in offices. Accommodation is provided by local authorities on rent. There are also bachelor quarters where bachelors are lodged together.

94. 2. *AFGHANISTAN (KABUL)*

There is no community of scavengers in Afghanistan. Latrines in towns are generally constructed in such a manner that they have an opening on the road-side. Farmers from the surrounding areas remove the night-soil and use it as manure. The municipalities do not appear to be concerned with the accumulation of night-soil or the bad smell or diseases generated and spread by such unhygienic latrines.

95. 3. *BURMA (RANGOON)*

The carrying of night-soil as head load, is not in practice in Burma. It is removed in buckets to the carts/trucks and thereafter to the dumping yard. A majority of conservancy labourers are either bachelors or single and as such, 10 to 15 labourers share one room. For the rest, accommodation has been arranged in the suburbs of Rangoon quite close to the city. They are all Indians and most of them hail from Nellore in Andhra Pradesh.

96. 4. EGYPT (CAIRO)

Till the introduction of modern drainage system in large provincial towns in Egypt, every house was required to have a well in which all the refuse was collected. This was cleared up at almost regular intervals by pumping the contents mechanically into hermetically sealed lorry-tanks. The work was first undertaken by a private company but later passed on into the hands of the municipalities. In Cairo it is carried on by the Tanzim (Public Works Department).

The refuse used to be carried out of the city where, after sterilization, turned into manure.

The system is still in vogue in the smaller provincial towns. In villages, a primitive well is generally attached to each house or group of houses. Whenever full, the well is drained by hand. Its contents are usually shovelled out and laid in the open after being mixed with dust. It is then left to dry and later used as prized fertiliser.

In smaller towns, where the well system still prevails, lavatories are connected with the wells with pipes. A hand-manoeuvred lever would cut off the connection with the well to prevent bad odours. The manipulation of a little handle after stools would remove the night-soil into the well. In villages, the stools are just above the well and lead directly into it. At night a peasant would go out to the lavatory or use a special basin for the purpose which is poured out into the well from the lavatory in the morning.

In model villages now under construction, public latrines are provided. Reservoirs in such cases are drained through pumping and a more hygienic method is adopted in the treatment of refuse before turning it into manure.

97. 5. FIJI ISLANDS

There is no scavenger class as such in Fiji. Ordinary labourers, both Fijians and people of Indian origin do scavenging work.

Where there are no sewers or septic-tanks, night-soil is collected in tubs and later transferred to night-soil trucks by hands. Night-soil is never carried as head load. Living conditions of such labourers are the same as those of unskilled labourers in the lowest income group.

98. 6. GHANA (ACCRA)

Almost all the public latrines are now of the septic-tank type obviating the offensive odour accompanying the former pan-removal system. Many residences have their sewage system as well. Where this is not applicable, night-soil is removed usually late at night or dawn. Contents are sprinkled with saw-dust.

As for accommodation, one room tenements with open verandah in front are provided by the Government. Scavengers are classified as labourers.

99. 7. HONG KONG

Night-soil collection is restricted by law to the hours between midnight and 6 a.m. Collection from domestic premises is carried

out entirely by women who are more suitable for work which involves entering into private premises during the small hours of the morning. The basic method for collection is that night-soil is transferred from domestic pans to bulk night-soil containers, two of which can be carried on a yoke by each worker. For conservancy purposes, both male and female labour is employed, the females being engaged on conservancy work only.

The bulk containers when full, are carried to a barge where they are stacked and shipped to the night-soil saturation tanks at Tsuen Wan in the New Territories. The matured night-soil is later sold through the Cooperative and Marketing Department as vegetable fertiliser. The containers are then cleaned and returned for further use. This method for bulk transport of night-soil is being gradually replaced by a new one known as the Sherriff/Baker Scheme, where the night-soil is transferred from domestic night-soil containers to special tank motor vehicles and thence by suction to enclosed tanker barges. This operation results in a much more hygienic service.

Night-soil collection takes place every night irrespective of weather conditions and the service stops only on Chinese New Year's Day.

The standard hours of work for night-soil collectors are 6 hours a day for 7 days a week. Overtime is paid for work performed on public holidays other than Sundays, if time off cannot be given in lieu. The workers work on a roster basis with two rest days per month.

100. 8. INDONESIA (DJAKARTA)

In Indonesia, no scavengers are employed to remove night-soil. The night-soil accumulates in septic tanks in respective houses which are pumped out by local municipality from time to time when full. The municipality charges at the rate of Rps. 30.00 (Rs. 5.08) per cubic meter.

101. 9. IRAQ (BAGHDAD)

The system of carrying night-soil as head load does not exist in Iraq as normally septic-tanks are in use.

102. 10. JAPAN

In Japan every house is provided with a toilet. Parks, theatres, department stores, libraries and all other sorts of buildings are provided with toilets with purification system or flush toilets.

Night-soil that may be seen in streets, though such a thing is very rare nowadays, may be considered originating from animals like cats and dogs. There are houses, which have underground septic-tanks where night-soil is stored and cleaned periodically.

Night-soil in a toilet with purification system and in a time-honoured dipping up toilet is removed by one of the following methods :—

Dipping up method : This is most primitive. A scavenger has to stick his ladle into the toilet receptacle and scoops and

pours night-soil into a wooden barrel. When 6 or 8 such barrels are filled, they are loaded into a hand-cart. The night-soil in barrels is then poured into a tank-truck of medium size, or else, the hand-cart heads direct for a transshipment or disposal site.

Suction method : This is better than the dipping system. A vacuum hose is stuck into the toilet receptacle from a car called vacuum car. The night-soil then is sucked into the car's tank and then carried to a transshipment or a disposal site. Septic tanks in Embassy owned houses are also cleaned by this method.

Transshipment : Night-soil in the vacuum car or tank fitted car is sent either to a transshipment site or to a sewerage dumping site for final disposal. At a transshipment site, night-soil is poured into a barge either for further transshipment to a bigger boat to be dumped in the ocean, or for transfer to farming villages by sea. Night-soil transhipped to a barge may be sent to a digester by sea. A transshipment site, therefore, must be constructed in a place where a river or canal may be made use of.

Every item necessary for carrying out the duties is furnished by the local Government unit free of charge. The following is a list of items issued to permanent and temporary workers alike :—

Winter Working Uniform ..	Every other year.
Summer Working Uniform ..	Every other year.
and Summer hat ..	Every summer.
Raincoat & Winter Cap ..	Every other year.
Rubber shoes ..	Every 3 months.
Gloves ..	Every 2 months.
Gaiters ..	Every year
Apron ..	Every year

Working hours are from 08.00 to 16.45 hrs.

At least one scavenging branch office is found in every ward of Tokyo. Big wards have two such offices. A branch office is, so to say, an advance base where scavengers flock, change clothes every morning, drink iced water in summer and take bath after the day's work. Here they are given their salaries and Government issues also.

One of the welfare facilities is bath-taking at a low cost of Yen 100 per person per month. They go in for a dip in a clean bath-tub before they go home. In a specially built but behind a branch office building, there are at least two bath-tubs, one for night-soil collectors and the other for general rubbish collectors. An outlay of Yen 100 out of their salary envelop is not a big burden at all, considering the fact that one has to pay more than Yen 480 a month if he takes a bath at a public bath-house every day. Although, a scavenging branch office and the Scavenging Bureau are under no obligation to set up bathing facilities as far as law is concerned, almost all the branch offices set aside a small portion of their budget as fuel expenses.

Their Unions run stores from where the scavengers can purchase various commodities at lower costs. The living conditions of scavengers in Japan are satisfactory and in fact they are better off than clerical workers or daily labourers.

103. 11. *MAURITIUS*

Most of the townships here have underground sewerage system which drains into the sea. The scavenging in these towns as far as house refuse and latrine cleaning are concerned, is done by family members or domestic hands. In one township and certain urban outskirts however, there is pail system of conservancy. These places are served by covered buckets and conservancy lorries. The accompanying scavengers who are mostly of Indian origin, carry night-soil buckets with covered lids on shoulders from houses to the lorry. The disposal is done in a central compost yard. Pit latrines are in use in villages. There are also septic-tanks and closed in concrete or steel chambers to receive night-soil where subsoil water level is high and no sewer connections can be easily effected.

104. 12. *EAST AFRICA (NAIROBI)*

Many of the big towns in East Africa have underground sewerage system and consequently the method of carrying night-soil as head load arises only very rarely. The case may be where new houses are under construction and proper latrines are yet to be built although even here the pit latrines are used. In the former cases local municipal authorities would permit construction of temporary latrines from where the scavengers carry the night-soil in buckets and throw it in an iron tin kept on an oxen cart. The night-soil is carried thereafter to the dumping area which is usually situated about 3 to 4 miles away from the town. The position in respect of African localities is little different. In these places there are pit latrines and the question of carrying night-soil therefrom does not arise.

105. 13. *PHILIPPINES (MANILA)*

In Philippines, there is no scavenger community as such. Individuals are employed from all sections. In big cities and towns garbage is collected either in trucks or push-carts. Night-soil is disposed of in most of the big cities through municipal sewage system or by constructing sinks in individual houses by the community.

In the absence of scavenger community, the disposal of night-soil is taken care of by individual families.

106. 14. *SAUDI ARABIA (JEDDAH)*

The living conditions of scavengers in Saudi Arabia are far from satisfactory. They are mostly people coming from Yemen, Nigeria and Sudan who work either as unskilled labourers or as scavengers. They live in filthy surroundings, rather ill-clad, and have no separate colonies of their own. They are supposed to be equal to any other citizens according to the tenets of Islam. After the work is over, they mix about freely with other respectable type of labourers and artisans. They are provided with carts in which they remove night-soil every morning through main roads and lanes etc.

107. 15. *SINGAPORE*

Scavengers here are called night-soil workers. The labourers employed by the City Council on night-soil removal are mostly

Chinese with a few exceptions. Men are employed in removing and carrying pails, while women do the cleaning and disinfecting the pails.

Compartment motor wagons go along all roads where the flush system has not been introduced in the city. The labourers carry the empty disinfected water and air tight pail from the wagon on the road to the house and remove the loaded pail which becomes air tight on closing to the wagon. Generally, he does not carry it as a head load but employs split bamboo lever over the shoulder carrying pails at each end of the lever. The pail is slipped into the empty compartment of the wagon and the motor wagon carries the labourer on to the next row of houses. The labourer has, thus, actually to carry the loaded pail only for a short time and distance *i.e.* from house to the road-side where the motor wagon is waiting. The motor wagon takes the night-soil loaded pails to the appropriate curing depots.

Living accommodation given is one room to two bachelors or a husband and wife with one child. Parents with more than one child are eligible for a two roomed accommodation which is the largest accommodation provided.

108. 16. SOUTHERN RHODESIA (SALISBURY)

Most of the towns in this country have the sewerage system. In towns without underground sewers, night-soil is not carried as head load. The night-soil is removed in the early hours of the morning by municipal scavengers in tank wagons which are either mechanically driven or pulled by oxen. Later on, night-soil is disposed of in sewerage pits outside the town.

109. 17. UNITED ARAB REPUBLIC

(a) *Aleppo*.—All residential quarters and public places in the city of Aleppo contain lavatories connected with general sewage or with well-dug pits where sewage networks has not been laid as yet. Night-soil flows from lavatories to public sewage where it gets mixed up with dirty water and goes outside the city or to the pits which are cleaned whenever necessary and the contents are handed over to scavengers.

(b) *Damascus*.—Most of the buildings in the Damascus Corporation are connected with general sewage but due to non-availability of sufficient number of public lavatories, especially in the modern parts of the city, there might be some dirt in some corners which scavengers clean and sprinkle with calcium.

(c) *Sweida*.—Near every house, the landlord digs a deep pit of two to five meters with suitable width and makes it a reservoir for salt water. Since the kind of soil helps much in absorbing water, only the dry material remains and mice live on it. The pit may thus not be filled before 20 years. The municipality is now thinking of installing new sewage network.

(d) *Homs*.—In areas not covered with sewage networks, the salt water and night-soil are gathered in pits within the building itself and these pits are cleaned from time to time by scavengers who carry dirt to orchards to be used as fertilisers.

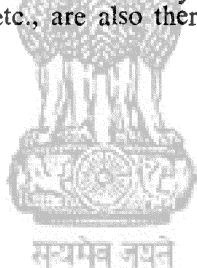
(e) *Daria*.—Daria Municipality follows the sewage system for disposal of night-soil. Cement pipes have been laid in the streets which lead to a low valley outside the city.

(f) *Lattakia*.—Sewage system has been laid on a large scale which lead to the sea. In areas not connected with sewage system, proprietors of buildings dig pits for night-soil which are cleaned by specialised labourers, other than municipality labourers. The wastes are used as fertilisers.

110. 18. *TRINIDAD*

The practice of carrying night-soil as head load does not exist in this region. In towns mostly flush system is in use. In smaller suburbs and country side districts, cess-pits are used. Other rubbish in the towns and suburbs is removed from the houses, shops, etc., by scavengers in municipal vans. In villages, it is dumped in fields and backyards for subsequent use as manure.

The scavengers are mostly treated like other daily paid labourers. On Sundays and holidays their wage rate is doubled. Uniforms, boots and gloves are supplied. They are, however, not provided with any house or house rent in lieu thereof. They are entitled to 12 days sick leave and 14 days vacation leave every year. Benefit for gratuity etc., are also there.



ADMINISTRATIVE SET UP

111. The problems of improving the methods of scavenging and the conditions of scavengers have not so far received the attention they deserve. Every one seems to take it easy and attaches no importance to them at all. Since Independence, we have been making progress in every walk of life but in the field of improving scavenging conditions very little has been done. Even the fringe of the problem has not been touched. Even the Planning Commission which has been formulating big schemes has not given this problem a serious thought it deserved. Had any specific allotment of funds for eradicating the inhuman practice of carrying night-soil as head loads and for improving the working conditions of the scavengers under the first two Five Year Plans been made, it would have brought in a lot of changes by now. We are near completion of the two Five Year Plans and the draft Third Five Year Plan has also been approved by Parliament but yet no attempt is in sight for solving the most insanitary and inhuman problem which seems to have its roots in India alone.

112. The problem of scavenging is a complicated socio-economic problem. There seems to be deep rooted prejudice in the minds of several caste 'Hindus' with regard to the disposal of night-soil. People are opposed even to the construction of latrines in their houses and prefer to go out in the fields or squat in open places within their easy reach. The scavenger is not allowed to enter the courtyard of the house and necessarily has to cleanse the latrine from the street or from the back side. This results in construction of latrines with their openings for cleaning along-side the main entrances of the houses. Municipal bye-laws or legislation remain ineffective in most places. The question is not of finances alone but needs a radical change in mental outlook and habits arising therefrom. The problem has to be tackled from different angles, and we have to bring in improvements in the entire process right from the collecting of night-soil to its final disposal. While doing so we have to solve many problems such as improvement of the design of latrines, introduction of receptacles, scrapers, wheel barrows—their use by men and women and their proper maintenance, use of improved type of vehicles, stoppage of bullock-carts and man-drawn carts etc., improvements in pail depots, sewage plants, farms, dumping grounds, better housing, water supply, improvement of working conditions of scavengers and so many other allied problems. At present, all these problems are handled by junior staff in the local bodies, and they find it difficult to carry out the desired changes. The official staff is not equipped for the task nor have they the necessary interest and much less enthusiasm for it. The municipalities and other local bodies etc., are reluctant to implement many of their schemes due to the dominating influence of certain persons and their old habits. If

these people fail to carry out certain improvements or abide by certain bye-laws, there seems to be nobody to question them and this necessarily delays every thing. They are positively a bad example for others in the community. Then there are many other problems like the abolition of Customary Rights which are too complicated to be left to the local bodies alone. Improvement of latrine structure is again a similar bristling with difficulties and people would not be ready to carry out the changes without an element of compulsion. In some municipalities, there are bye-laws to connect the dry-latrines with underground drainage wherever such lines have been laid but no body cares for such bye-laws. All this requires firm handling. No doubt much could be achieved with a great deal of persuasion but those who execute must combine firmness with flexibility. The local bodies also do not have much initiative due to one or the other reason and do not bring in the changes required. There ought to be, therefore, some authoritative sanctions over all these agencies which should not only guide the local bodies but ensure that all the schemes formulated are carried out successfully. This can best be provided by the State Governments at the State levels. *The Committee feels that the problem of improving the scavenging conditions should be dealt with by the Local-Self-Government Departments of the States/Union territories or such other Departments as may be concerned with it. All the necessary legislation, policy, directive principles etc., should be issued by them and they should evolve a machinery to ensure the implementation of their directives etc., fully and properly through the local bodies and such of their officers as they may like to appoint. Mere enacting of legislation or issuing directives would not be so much helpful as their proper implementation.*

113. The Constitution of India confers certain safeguards on the Scheduled Castes. For their welfare, the State Governments/ Union Administrations have appointed Welfare Officers at the State/District and Taluk levels. These Welfare Officers have to look after various aspects connected with the welfare of the underprivileged sections of the community. Being in close touch with these communities their advice to the States and other bodies plays an important role. They are concerned with the implementation of all schemes sponsored under the State Plans, as well as the Government of India and those in the General Sector. Besides, there are so many other duties which are assigned to them by the State Governments. They remain too busy with all that. They do not, in most of the cases, go to the lowest of the low, but confine their activities to the upper strata of the Scheduled Castes society. The complicated problems connected with scavenging conditions require the services of a full-time officer in each town who should be meant exclusively for dealing with them. It should be his sole duty to see that the various schemes are implemented fully and properly. He should work as a liaison between the scavenger's community and the local bodies and the States. He should preferably be responsible to the State Government direct. Being a State official he may be able to see the implementation of various schemes impartially. However, in

cases, wherever the State Governments feel that the officer can very well look after more than one town or place, they may allot him a wider area. Such officers should try to mix more freely with the scavengers and create a sense of fellow-feeling in them. The psychological approach to the problem would be more useful and these officers should endeavour to win over the scavengers, change their outlook, improve their methods of work and way of living etc. In this, they must take the help of the social workers and leaders of the scavengers' community etc., in weaning the scavengers from said evils like drinking and gambling etc.

As the Committee wishes to emphasize the abolishing of the inhuman practice of carrying night-soil as head loads immediately and certainly not later than the end of the Third Five Year Plan and improve the conditions of work, the Committee suggests that the State Governments/Union Administrations should appoint special officers exclusively to look after the problems of scavenging and scavengers. Much care should be taken in the proper recruitment of these officers. They should not only have a background of welfare work but also to understand the problem of scavenging and scavengers and have a zeal to improve their lot.

Need for
Central
Officer

114. The Ministry of Home Affairs have been giving large grants to the States/Union Administrations for the purchase of wheel barrows/hand-crafts. How these grants are being spent or utilised, has been discussed at length in a separate chapter. Here we would confine ourselves to the administrative set up only. At present, there is one officer at the Centre to sanction grants or scrutinise proposals from the State Governments and the Union Administrations. This is done by him along with his other work connected with the welfare of Scheduled Tribes, Scheduled Castes, Denotified Tribes and Other Backward Classes as a whole on All-India basis. There are so many other items of work which leave no time for him to concentrate on the scavenging problem. As has already been pointed out, the problem has various aspects to be solved. Unless concerted and constant efforts are made, results are bound to be very poor. The State Governments and the local bodies take it very easy and do not pay much attention to this problem. The Officer from the Centre can be a very good and strong factor in this set up. He can, besides formulating policies and pressing the States to implement them, go on rounds in the States at periodical intervals for on the spot study and inspection. His constant visits to different States would ensure the proper implementation of the schemes sanctioned by the Centre. His visits to the States would compel them to do something in this direction, make good use of Central grants, adopt a uniform policy, and his discussions with the local authorities would bring in many desirable changes. His visits of inspection in the different States and advice to the local authorities to adopt better methods of working in use elsewhere will go a long way in the effective implementation of the programmes. He can prove to be a very good liaison between different State Governments and the local bodies. The Committee, therefore,

suggests that *the Central Government must appoint an officer having the necessary background knowledge of the various problems of scavenging and scavengers in the country at the Centre to deal with these problems and watch their day-to-day development.*

Though removal of untouchability, improvement of the lot of Harijans in general and of the scavengers in particular, had been stressed by leaders of social reform in the past, it was Gandhiji who converted it into a revolutionary movement by rousing the social conscience of the 'Hindu' community. During its early days, the movement got such strength that at one time it appeared as if it would not take long before the evil was stamped out. This was because both officials and a large army of social workers made common cause to deal a death blow to the evil and the impact of the upsurge brought about a tremendous change in the social mind. The very nature of this problem is such that unless it is dealt with as a national problem both by the Government and the people, its solution will continue to baffle us.

The Committee, therefore, recommends that *if all that has been adumbrated in the report is to be implemented in the immediate future, a small Vigilance Committee consisting of non-officials who are well acquainted with the magnitude of the problem and have shown serious interest in tackling it, should be appointed by the Ministry of Home Affairs to move about from State to State, meet and discuss with officials, social workers and members of the public about the urgency of the problem and mobilise their efforts for solving it according to their own local conditions.* This will not only remove the indifference and ignorance of the public at large in this matter but expedite the implementation of recommendations made in the report, in a definite and systematic manner. It is admitted on all hands that this evil which is age-old can be remedied mainly by joint efforts of the public guided by its non-official organisations.

Abolition of customary rights would perhaps require passing of legislation by the Parliament as well. It should be the duty of *the Ministry of Home Affairs who are concerned with the welfare of Scheduled Castes to initiate such a legislation at the Centre.* The officer appointed, should also see to the implementation of such a law in all the States on a uniform basis.

115. The Ministry of Health gives grants/subsidy etc., for the water supply and drainage schemes. The Committee suggests *that the ceiling for water supply and drainage schemes should be fixed separately. The ceiling for drainage scheme is too small in comparison to the cost and requirements of this scheme. The Ministry of Health should consider increasing this ceiling.* The transportation of night-soil and refuse of the towns require costly mechanised vehicles. The local bodies do not find it possible to spend large amounts and consequently they neglect the transport system. The Committee suggests that *the Ministry of Health may consider giving some grants/loans to be recovered in convenient*

Health
Ministry

instalments to the local bodies through State Governments for the purchase of vehicles etc., for the transportation of night-soil and town refuse.

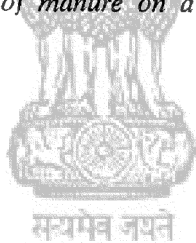
**Ministry of
Food &
Agriculture
(Agriculture
Department)**

116. The Committee understands that there are a few schemes for converting night-soil into manure under agricultural programmes. *The Ministry of Food and Agriculture (Agriculture Department)* may also consider what possible help they can give in this direction.

117. For the administration of all schemes, the main burden will have to be borne by the local bodies concerned. They will have to make necessary adjustments and provisions in their by-laws, rules etc. The State Governments can reduce their burden to a great extent and provide technical, financial and such other help as may be needed by the local bodies. *The State Governments/Union Administration should, therefore, help their local bodies technically, financially and otherwise.*

**Ministry of
Community
Development
and Coope-
ration**

118. The Cooperation Department of the Ministry of Community Development and Cooperation can also tender their advice and start some of their schemes, if possible, for the welfare of scavengers particularly those who may be affected due to abolition of customary rights, and also help in the collection, preparation and sale etc., of manure on a co-operative basis.



CHAPTER FOURTEEN

SOME GENERAL ASPECTS

119. From the account given in the foregoing chapters, it will be clear that the problem of scavenging and the problem of scavengers arising out of it have been totally neglected for which the entire Indian community can be held responsible. The time has now been reached when any further neglect may lead to undesirable consequences. The miserable condition of scavengers is often exploited by interested parties for political and other objects and this often complicates the problem. Demands on the part of the scavenging community are becoming larger and more persistent leading to tensions and frequent strikes. A practical and humanitarian approach is therefore urgently required for remedying the situation and preventing a further drift. It will take time to remove the old prejudices of the people with regard to the disposal of night-soil and it is equally an uphill task to overcome the apathy of scavengers to the improvement of their own occupation. The local bodies and their health staff have yet to learn to perform their duties in a far more scientific and intelligent manner. We have to seek the active cooperation of all concerned, the public, the local authorities and their field staff and the community of scavengers, failing which conditions in this age-old occupation cannot be improved.

120. We should try to anticipate what the scavenger reasonably requires for efficient work and not wait till he vehemently puts forth his demands which make him indignant in his attitude and triumphant when he wrenches it out after a strike. Trade Unionism is becoming stronger day by day among the scavengers and we should not wait till it becomes militant. And again, as long as customary rights are in vogue, the problem would continue to remain insoluble. The problem would be very much simplified if scavenging service is municipalised. If the scavenger's methods of work are improved making his occupation cleaner, his surroundings sanitary so as to give him a sense of self-respect and provide him facilities which are necessary for a better living, there is no reason why transformation should not be achieved. The Committee has already suggested various means for the improvement of the methods of working of scavengers in previous chapters. In this chapter, we would confine ourselves to the improvement of his living conditions and environment. Though this has not been within the terms of reference of this Committee, since this important aspect has a direct bearing on the problem of scavenging an attempt has been made to present the various issues requiring urgent attention.

121. The first and foremost requirement for the improvement of living conditions of scavengers is housing. Provision of a suitable residential quarter to conservancy staff is not an amenity but an absolute necessity. The conservancy staff quarters are as

Housing

at present in the most neglected condition. In the majority of cases, scavengers are not allotted any quarters, but instead some nominal house rent is paid to them. With the few exceptions, wherever some quarters have been provided, these are few in number, and much below the minimum standard. The location is often the filthiest spot—very often near and around a public latrine, pail-depot, a morgue, a dirty drain or a dumping ground. In several cases, quarters have been provided outside the towns far away from their places of work. The scavenger has to come from long distance for work. In the provision of quarters sweepers seem to enjoy a preference over scavengers. Efforts are generally made to set up conservancy staff quarters at segregated places concentrating the sweepers etc., at those places. The Committee feels that *the quarters for conservancy staff should be as near their places of work as possible but never around the pail-depots, morgues, public latrines, dumping grounds etc. Such location of scavengers' quarters at such places tantamount to a criminal neglect. A few quarters here and a few there may be built in colonies inhabited by others as well so as to avoid segregation and give an impression of a mixed colony. The Ministry of Home Affairs have in connection with the programme for the removal of untouchability already stressed the need for mixed colonies.* Settling of conservancy staff at segregated places in the form of colonies gives rise to tensions leading to strikes even on trivial grounds. If they are put up in mixed colonies, the danger of threats etc., gets minimised and people can also be weaned away from their insanitary ways of living. They would be influenced by others in their ways of living and improve their habits and behaviour. Kanpur, Indore and Bangalore have put up some nice colonies in this regard in the midst of good and decent localities.

Scavengers cannot properly maintain the quarters provided by the local bodies. They put up additional odd structures around the quarters, close the windows, ventilators with tin-pieces, torn jute-bags etc., extend their verandahs putting up mud walls, tin-sheets etc. This is so with municipal employees but the conditions are worse with private scavengers or the municipal employees having no accommodation provided by the local bodies. They practically live in hovels which are places fit for animals and not for human beings. There are no arrangements for ventilation, water, schools roads etc. These huts are all 'kutchas' normally having tin-pieces or packing cases as cover for the roofing and are so low that one has virtually to crawl into them. They have no chimneys for the smoke to get out. At many places, the conditions were so bad that it became very difficult for the members of the Committee to get inside them. These colonies are located at present in the worst parts of the towns near open drains or public latrines etc. No latrines or bathing places are provided for them. *It is of primary importance that the housing conditions of scavengers are radically improved. This would create a new sense of self-respect in them and particularly their children.* The Nagpur, Kanpur, Madras, Indore and Mysore Corporations deserve congratulations for the good beginning they

have made. They have put up some good tenements which are described below :—

Kanpur (Uttar Pradesh)

The Corporation has put up a building at Biryana Road for Harijans. This is a three storey pucca building at a cost of Rs. 1.90 lakhs which is exclusive of the cost of land. There are 33 one-room tenements. Each room measures about 15'×15' and has a high roof, very well ventilated, with a kitchen. Each unit of 2 tenements has a bath-room with water-tap and a flush-out latrine. The building is in the midst of a good locality. Those who want can get electric connection for their houses and pay for the service.

Indore (Madhya Pradesh)

Plassia Harijan Colony on Plassia Road, Indore, is a good venture. All 'pucca' quarters in bungalow type units have been constructed by the Corporation in the midst of a fashionable area of the city. These units are well built near a park laid for them. A room measuring about 15'×15' or so has been provided to each family. There is a back courtyard and covered verandah. The inhabitants have themselves put up kitchens in their courtyards and some have extended the living place by erecting mud walls etc. There are about 56 quarters with units of 7 quarters each. The cost of each quarter is Rs. 3,000. There are, however, no attached bath-rooms or latrines with these quarters. There are 6 common water taps for general use, 4 common bath-rooms with taps inside them. There is a community hall but there is no social worker in charge of the centre. A primary school has also been provided. The latrines are, however, very dirty. The latrines are service-type, without receptacles with a back gully. Pigs are about the whole place.

Ujjain (Madhya Pradesh)

Ujjain Municipality has constructed some quarters stated to be 32 in number under Low Income Housing Group Scheme. Four of these quarters constructed at Anandpeth were seen by the Committee. Each of them has cost Rs. 3,500 and is provided with a separate latrine and a place for bathing. These are one-room tenements with a verandah at the back, pucca plinth, and well ventilated.

Jabalpur (Madhya Pradesh)

Jabalpur Corporation has established a colony known as Thakar Gram or Thakar Bapa Sweepers Colony. This is a well planned colony. This has a big lawn in the centre with single room tenements—with a store, kitchen and verandah. Plinth and walls are all pucca and have tile roofing. Each quarter costs Rs. 4,000. There is a primary school and one teacher has been appointed by the Corporation on part-time basis. The school has a good building which can be used as a community centre also. Nearby a building was constructed for a Welfare Officer which post, however, was subsequently abolished and

hence the building is lying vacant. There are a few chowkidars' quarters also which are lying vacant. No proper use is being made of the buildings. Doors and other accessories from these buildings have been stolen away.

Nagpur (Maharashtra)

Nagpur Corporation has constructed a colony for sweepers at Mangalwari area (Gangabai Ghat) which is quite a good colony though it is at a little distance. Every tenement has one room, verandah, kitchen, latrine and a water tap. Each of these quarters cost Rs. 2,800. The blue print of these quarters is given at Appendix XIII.

Madras

At Pensioners Line, the Madras Corporation has set up a colony for sweepers and scavengers and constructed 36 quarters. These are one-room tenements each measuring about 15' × 8'. A flush-out latrine and bath-room is attached to each tenement. The cost of each tenement was stated to be about Rs. 1,200. There is, however, no verandah which if added would cost about Rs. 150 to Rs. 200 more and add to convenience of the residents. There is, however, no electricity though it could also be provided. At Kurvarankulam Lines Harijan Colony, there are 56 tenements each with one room of 10' × 10', with a kitchen, verandah and a separate septic-tank latrine.

Secunderabad (Andhra Pradesh)

The Secunderabad Corporation has provided two-room tenements with a place for bath, kitchen, dry latrines etc., to some of their employees. Their colony at Prakashamnagar is a good one. Besides one room, there is a side-room with asbestos roofing. There is piped water, electricity, kitchen, verandah, latrine and courtyard. Each tenement costs Rs. 2,500. People have also grown flower-beds in their courtyards. These quarters are on hire-purchase system. After some time, these would become the property of the scavengers etc. The occupants have to pay about 5% cost initially and then every month the Corporation would be deducting 15% from their income. These quarters have been built under the Low Income Housing Scheme. Besides the scavengers, some Caste Hindus also live there.

The municipal quarters are normally provided free of rent in most of the towns. Such of the persons who are allotted municipal quarters are not given any house rent. Some municipalities, however, charge nominal rent ranging from Rs. 2 to Rs. 5 for the quarters provided by them.

Slum Clearance Schemes

122. There has been some progress in recent years in the execution of slum clearance schemes. Besides the schemes of the Government of India, some of the State Governments have also some schemes. Every effort should be made to avail of the maximum benefits from these schemes for the scavengers. The Committee happened to visit some of the colonies built by the Government of Madras for the welfare of fishermen and

others. At Santhome on the beach, the Committee saw 500 tenements for fishermen. Each tenement consists of one room measuring about 14' x 9', a kitchen 9' x 9' and a passage 5' x 9'. A bath room and a flush-out latrine is attached to it. The colony has two storey buildings and each house costs Rs. 4,200, which is exclusive of the land cost. Economic rent is Rs. 24 but subsidised rent inclusive of electricity and water would come to Rs. 12. Water taps for washing etc., would be provided in each house but for drinking water there will be a common tap for every ten tenements. A community hall will also be put up. The tenements had not been allotted by the time of the visit of the Committee. A note on the cost etc., and the lay-out of the Foreshore Tenements is given at Appendix XIV.

At Namasivayapuram and Trustpuram in Madras, other schemes for the slum dwellers have been taken up by the Corporation. The Corporation put up the plinths and gave two to three truck loads of earth, some cement, windows and a cash grant of Rs. 25 to each slum dweller. A note giving details in this regard is given at Appendix XV. The Madras Government are making good use of Slum Clearance schemes. Along with others some scavengers and sweepers are also being benefited. The steps taken by the Government of Madras can serve as an example for other States. Most of the sweeper colonies, particularly of private sweepers and scavengers, are the worst slums. These are the places of diseases etc., and in all fairness deserve immediate attention. The Committee suggests that *for the welfare of scavengers/sweepers maximum use of the Slum Clearance Schemes should be made. It is necessary to have a special provision in the plan under the Works and Housing Ministry for providing houses to the conservancy staff of the local bodies; otherwise the stupendous problem will remain unsolved. The Central Advisory Board for Harijan Welfare has also recommended that the provision made for scheduled castes housing should be spent on the scavengers also and not confined to Harijans living in rural areas only.*

123. Secunderabad is making use of this scheme for municipal employees. They provide houses to sweepers and scavengers under this scheme on hire-purchase system. The Committee recommends that *local bodies should construct houses for scavengers under the Low Income Housing Scheme and as far as possible pass on these quarters to them on hire-purchase system as is done in Secunderabad. This would give a sense of ownership to the scavengers.*

Low Income
Housing
Scheme

Leaving aside the schemes under Slum Clearance or Low Income Housing Scheme, *it would be advisable for the local bodies also to construct houses for scavengers and give them on hire-purchase system. This would enable the scavengers to own their houses after some time and live in them permanently.*

The Committee has given some description in the preceding paragraphs about certain better housing schemes adopted by

some local bodies. The Committee, however, feels that *one-room tenements are not adequate. Scavengers have large families and even taking an average of five members per family, one-room tenements are too small. From the point of view of moral hygiene also every tenement must make provision for two living rooms, a kitchen, a bath room, a latrine flush-out or any other sanitary type like septic-tank etc., build-up cupboard, a slightly raised platform for fire place with a hood and chimney over it and possibly a hollow underneath where the scavengers may store fuel and a verandah. Water is very essential and must also be provided. Where available, electricity must also be provided.* Tenements of the above description are, however, likely to cost much and all the local bodies who cannot afford such quarters, may provide one-room tenements with verandah, kitchen, bathroom, latrine etc., which should be the minimum. *The quarters need not necessarily be completed 'pucca' and wherever the cost is on the high side these may be semi-pucca as well. The cost of each tenement for such quarters which are not to be owned by the scavengers on hire-purchase system etc., may vary from Rs. 1,200 to Rs. 2,000 on the lines of the quarters built at Namasivayapuram in Madras under the Slum Clearance Programme.*

It is, however, very important that amenities like primary school, a welfare centre with a community hall which may be used as community centre, medical facilities etc., are provided in large colonies. A social worker should invariably be provided to be in charge of the welfare activities of the centre. There is a need for appointing a social worker for covering a population of 100 families.

Conditions of service

124. Sweepers' strikes and other troubles are generally the result of unsatisfactory conditions of service. Though on many occasions, political motives are also behind strikes, bad service and dirty occupational conditions are primarily responsible for them. The better the service and working conditions of these workers, the better would be the relations between the scavengers and the municipal bodies. At present, conditions as seen by the Committee in different States are far below the minimum needs which is the principal reason for discontentment amongst scavengers.

Wages

125. The question of wages is a very complicated affair. Wages for the same type of work are paid differently from State to State and from town to town within a State. The Committee has found great disparity in wages. Whereas, these are highest in Kerala, they are the lowest in Uttar Pradesh. Some local bodies pay wages according to basic hourly rates, some according to the class of municipality and according to the nature of work, some on monthly basis, some according to the Minimum Wages Act and so on. The Committee would suggest that *wages should be paid to scavengers according to the Minimum Wages Act.* Pending improvement of municipal revenues, it should be necessary for the State Governments to subsidize the local bodies etc. Some States are treating scavengers and sweepers as Class IV employees. This leads to greater satisfaction and

levelling up of conditions. Since the question of wages and other allowances etc., is a thorny question, it is suggested that the State Governments/Union Administrations, who have not done it so far, must appoint small committees to go into the whole question of wages and payment of other allowances to scavengers and suggest basic wages which should, however, not fall below the minimum wages. The Government of Uttar Pradesh had appointed a Committee to inquire into wages and conditions of work of sweepers employed by local bodies and still the Committee found that the wages of the scavengers and sweepers in the State were very low and required revision. Side by side with the question of wages, the question of payment of other allowances as may be admissible to scavengers must also be considered.

126. Some municipalities as in Maharashtra and Gujarat are paying an allowance known as 'Unclean Work Allowance' for doing insanitary work of scavenging. The terminology of the so called 'Unclean Work Allowance' creates an adverse psychological effect on one's mind. Such an allowance should not be paid in cash but in the form of extra amenities such as gloves, water etc., to make the occupation more clean. As it is, the extra cash paid is wasted and the work remains unclean as ever. The Committee feels that such a terminology should not be used. Unclean work allowance can very well be called like any other ordinary allowance.

Unclean
Work
Allowance

127. It was generally complained by scavengers that creditors throng the places when the wages of the scavengers are distributed on pay-day. The Committee feels that wages should be distributed in the presence of a responsible officer of the local body who should ensure that no creditors are allowed to throng the premises and harass the scavengers. Such an officer should also keep an eye on the supervisory staff of the local bodies directly in touch with the scavengers and who are often alleged to accept illegal gratifications from scavengers.

Distribution
of Wages

128. Hours of work vary from 7 hours to 8 hours a day. Scavengers are required to work in the morning as well as in the evening. Whereas, the scavengers complain against long hours of work, the local bodies feel that they finish their work within two to three hours or so and go away to their homes. However, the Committee feels that for full time employees, the hours of work should not be more than 7 hours per day of which only 4 to 5 hours may be reserved for scavenging work. Part-time workers should not be asked to work both in the morning and evening as this deprives them of any other work and causes them hardships.

Hours of
Work

The committee is of the opinion that scavengers on duty should be called only twice for roll call — once in the morning and once in the afternoon.

Roll Call

129. Local bodies should frame leave rules and the scavengers should be given the benefit of casual, privilege, earned leave etc. Women scavengers must be given pre-natal and post-natal leave. In many of the local bodies there are at present no specific

Leave Rules

rules for giving maternity leave to women scavengers. *Women scavengers must be given leave in case of mis-carriage etc., also. Leave in case of maternity and mis-carriage etc., should be quite adequate.*

Off-Day in a Week 130. *State Governments/Union Administrations should see that at least in local bodies where the scavenging service is municipalised, scavengers are allowed a full day off in a week. This benefit is denied to scavengers at present. The West Bengal Government have approved a scheme for giving an off-day but it has not been implemented so far. An off-day can be given to scavengers in municipal service easily but there would be many practical difficulties in case of customary scavengers. Abolition of customary rights alone would solve this problem. However, as long as these rights are there, the problem would continue.*

Uniform 131. *Very few municipalities provide uniforms to scavengers even though there may be a provision for them. Whatever uniforms are supplied are not adequate. Sometimes the uniform is not given for long periods. The committee suggests that all the local bodies should give sufficient and proper summer and winter uniforms both to male and female scavengers. Some necessary items of equipment have already been suggested by the Committee in different chapters. Long gum boots, head gear, rubber gloves are necessary for scavengers working particularly at the pail-depots, dumping grounds etc. Proper kit for scavengers for cleaning underground drains should be supplied. It is understood that in Japan, a scavenger is supplied with winter working uniform, summer working uniform, raincoat, winter cap, summer hat rubber shoes, gloves, gaiters, and apron etc.*

Permanency of Service 132. *Representations have been made to the Committee demanding that the services of temporary scavengers be declared as permanent. The Committee had occasion to examine this question and is of the opinion that every effort should be made by the local bodies to give some security of employment to the temporary scavengers and avoid keeping them on a temporary basis for an indefinite period.*

Full-time & Part-time Workers 133. *Most of the local bodies appoint scavengers on part-time basis and extract work from them in the morning as well as in the evening. Such part-time workers perforce, have to do some other work as well. The Committee suggests that the local bodies as far as possible should not appoint part-time scavengers. Full-time worker is bound to be more efficient.*

Appointment of Scavengers in other Occupations 134. *As at present, scavengers are generally not appointed in other services. The Committee suggests that scavengers who may like to leave their occupation should be appointed on other posts such as peons in other departments, 'Chowkidars', 'Nakawalas' etc. Vocational training may be imparted to such of the scavengers who may like to settle in a trade. After training some subsidy/loan may be given to them for settling in new trades. They should be given chances and opportunities for their training as drivers, cleaners and mechanics etc. in the municipal workshops and other gainful occupations.*

135. Supply of sufficient water to scavengers is an absolute necessity. In most of the cases, at present, it is very insufficient and given at inconvenient times. *Sufficient water for drinking and washing must be supplied to scavengers in or near 'bastis' and at times when they return from work.* **Water Supply**

136. A few of the local bodies give soap allowance or a cake of soap or so to scavengers. As this is generally misused, *arrangements for supply of soap at the place of work like pail-depots and dumping grounds etc., should be made.* **Soap**

137. Women scavengers carry their children particularly small ones along with them and leave them at places of work which are full of filth etc. *Creches should be started in the colonies of scavengers where a paid worker preferably a trained lady worker may be appointed to look after the children. Children must be taught clean ways of living and habits so as to make them clean persons.* Scavenging work is mostly done by women throughout the country and they, therefore, need much more attention. **Women Workers**

138. In each colony of scavengers, *there should be established Community Centres where care of children is combined with training of women in some crafts and adult education. Such Community Centres should also be used for cultural purposes and amusements etc.* **Community Centres**

139. At several places the Committee received complaints that children of scavengers were not given admission in schools, hostels, etc., easily. *The State Governments and Local Bodies should ensure that children of scavengers are provided easy admission in schools and hostels irrespective of their caste. Efforts should be made to open primary schools near their 'bastis' where children of scavengers and other communities may receive education.* **Education**

140. Scavengers complain that due to the filthy nature of their work, they suffer from occupational diseases such as Hookworm, Leprosy, T.B., etc. On enquiry from various medical authorities and health officers, we were given to understand that this belief is not quite correct. Not a single health officer contacted by the Committee in this regard, was of the view that scavengers suffer from any occupational disease as such though a few of them had some doubts about Hookworm and skin diseases. No State has made any survey to find out if scavengers do suffer from any occupational disease. Though some of them have provided medical facilities none has conducted any such survey. The Committee recommends that *all State Governments should conduct a medical survey and find out if the scavengers suffer from any disease due to their handling night-soil. If so, proper medical arrangements for them should be made. Scavengers must at least be examined periodically.* **Occupational Diseases**

141. The scavenger is called by many a name like 'Bhangi, Khakroob, Jamadar, Mahater, Thoti, Jharoowala, Halalkhor, Dom, Mahar, Madaru', etc. These names have acquired an evil odour and should be changed. Some efforts in this regard have **Name for Scavenger**

been made in Uttar Pradesh and a scavenger at a few places is now called 'Safaiwala' or 'Safai-Kamgar' or Safai 'Mazdoor'. At some places they call themselves 'Balmikis'. In a few places in the South, he is called a 'labourer'. On the Railways, however, the sweeper or scavenger is called 'Cleaner', a much more dignified name. People travelling on the Railways do not look down upon him. He is called in to clean the compartments in which process he touches the luggage and other articles of the passengers quite freely. With the exception of extremely orthodox people, nobody minds this. The Committee suggests that *in order to create a healthy atmosphere and psychological background, it is necessary that the scavenger should not be called by the age old name. He should be known by some more decent terminology according to local conditions and language.*

The Pig

142. The pig is kept as a domestic animal by a good number of scavengers in most places. The Government of India as well as the State Governments give financial assistance to Scheduled Castes and others for Piggery Schemes for their economic development under the Five Year Plans. Many of the scavengers get such a financial assistance and start breeding pigs in their 'bastis' in towns. They do not breed pigs on modern and hygienic lines. As it is, the scavenger cleanses the night-soil of others but not his own or that of his brethren. No scavenger would ever touch the droppings even of his own pig. The pig deposes for him and does his duties but even a pig does not touch the droppings of a pig. At many a place, the Committee saw pigs inside the latrines splashing and spoiling the whole place. They move about in all localities in good numbers without any restriction. Even if somebody is sitting inside the latrine, a pig would enter the back-side of the latrine. Most of the public latrines and also private latrines are so constructed that there are no barricades to the pigs' entry. Rubbish bins are a common object of their attack. The pig nuisance has to be stopped. In India a pig is not liked either by the 'Hindus' or the 'Muslims' or others. It is looked down upon by every one but it is a source of income to scavengers in particular. The Committee, therefore, suggests that *the rearing of pigs in any area of town must not be allowed. If anybody wants to rear piggery he should do so on the proper lines away from towns.*

Urinals for Men & Women

143. We have elsewhere discussed the question of the need for and type of latrines. Here, we would confine ourselves to the construction of urinals only. It is found that we have not yet developed any sense for proper use of urinals. The existing ones are few in number and urinals for women hardly exist. These have been generally set up in places far away from crowded localities. The result is their misuse. People urinate at every corner, or near the side of a wall of a house, just on the pavement. Leaving aside the big cities, where the number of urinals is very inadequate, in another towns there are hardly any to be found. Often people misuse the urinals when badly constructed and do not hesitate to meet the call of nature there. The Committee suggests that *adequate number of urinals, preferably with automatic water arrangements, should be put up at*

public places like bus stands, market places, parks, cinema halls, thoroughfares etc. Urinals for women must also be provided in sufficient numbers. Urinals near latrines are bound to be misused and should be avoided. Efforts should be made to equip men's urinals with Western type basins which cannot be misused.

144. The dust-bin is considered as unnecessary in many a town and local bodies perhaps feel that they can do without them. In their absence, people throw away the refuse etc., wherever they like and very often just on the main roads or steets. Very few make use of dust-bins even in their homes and throw out everything in the street to be collected by a municipal sweeper. One should consider himself to be lucky if he passes through the narrow lanes of old Delhi without a shower of house dirt or the peelings of vegetables or pieces of stale bread thrown from the balcony on the upper storey. The Committee suggests that local bodies must provide dust-bins at all suitable places which should be within easy reach and ensure their proper cleaning. These dust-bins may be kept fixed on paved floors. People must be taught to keep small dust-bins or drums etc., in their houses for the same purpose. Though in many local bodies there are some bye-laws against throwing refuse etc., in the lanes or roads, these are not put into practice. Dust-bins

145. Some of the problems stated by us can be only solved by enacting necessary legislation. The State Governments/ Union Administrations, in the light of the legislation and the municipal bye-laws etc., already in force, should explore the possibilities of framing rules, bye-laws etc., which they may consider necessary for the solution of various problems connected with the conditions of scavenging and scavengers. But mere framing of rules etc., is not of much use unless these are put into practice. Every State/Local Body has some rules and municipal bye-laws etc., but very few of them are being observed. Legislation

146. What laws and regulations cannot achieve, educative propaganda can. Various processes of scavenging problems such as the use of defective and good latrines, methods of working at pail depots, dumping grounds, the system of carriage etc., can be filmed by the Ministry of Information and Broadcasting in consultation with the Ministry of Home Affairs and the good and the bad spots in the country presented before the masses who should be educated in the use of improved methods. We know in this country that the conditions of scavenging are bad but do not seem to realise that these are too bad and dangerous. These have to be brought home to masses to create a sense of shame and compel them to think in terms of their improvements. The documentaries, cinema slides etc., prepared by the Film Division of the Ministry of Information and Broadcasting would be of great help in creating public opinion for improving the conditions of scavenging and those of the scavengers. Propaganda

The Ministry of Home Affairs have been giving large grants to Non-Official Organisations throughout the country both under the Centrally sponsored programme as well as under State

Plans. Besides, there is ample provision for development programmes under the General Sector of Five Year Plans. Many of the Non-Official Organisations have been provided funds for the purchase and maintenance of cinema vans also. They publish posters, booklets, leaflets, make use of magic lanterns etc., for propagating ideas for the removal of untouchability. These organisations should be requested to take more interest in the improvement of scavenging conditions and the conditions of scavengers. Their propaganda should also be focussed on a countrywide construction and use of the various types of sanitary latrines which have been devised so far. This is one of the quickest methods for the removal of untouchability as it is well known that this evil practice has been prevalent on account of the unclean occupation of scavenging followed by Harijans. *The Ministry of Home Affairs and the State Governments/Union Administrations should ensure that those organisations who get financial assistance either from the Centre or the State Government must include schemes for the improvement of the conditions of scavenging and the scavengers in their programmes. They should be asked to publish posters, leaflets, etc., propagating the need for improvement of these conditions. The organisations who have got cinema vans should be asked to make use of such vans for the purpose of schemes for putting an end to the practice of carrying night-soil as head loads, conversion of dry latrines into sanitary ones, schemes for improvement of the scavenging conditions and those of scavengers. This should be one of the compulsory schemes seeking assistance from the Centre and the States.*

147. *It is essential that State Governments and the Ministries of the Government at the Centre should draw up a phased programme for implementing the various suggestions in a systematic manner within end of the Third Five Year Plan.*

CHAPTER FIFTEEN

SUMMARY

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CHAPTER TWO

Cleaning of Latrines

The Receptacle

- | | | | |
|----|--|----|------|
| 1. | The use of receptacles in private and public latrines should be made compulsory. | 17 | 9 |
| 2. | The receptacle should be made of iron sheets or M.S. plates of suitable gauge to last at least a year or so and should be provided with a handle on one side and a slanting side on the other. | 17 | 9-13 |
| 3. | The non-use of receptacles in latrines should be made an offence and the defaulters dealt with properly. | 17 | 13 |
| 4. | The Municipal bye-laws should be so framed as to penalise the use of a receptacle other than the prescribed size and make. | 17 | 13 |
| 5. | The house-owners left to themselves would not go in for the receptacles even though it is made obligatory and penalty imposed for failure to provide the receptacle. The receptacles should, therefore, be supplied periodically, at least once a year or more if the first is broken or damaged, by the local body directly or through licensed shops on a no-profit-no-loss basis, and if necessary at subsidised rates. | 17 | 13 |
| 6. | It should be the duty of the scavenger and the area sanitary inspector to report to the local body about a receptacle which might have broken or been damaged. | 17 | 13 |
| 7. | The local body should recover the cost of receptacle along with the scavenging tax where such a tax is in force or with other taxes at the time of their realisation. | 17 | 13 |
| 8. | The floor of latrines is often 'kutcha'. It should be cemented and slanting outward. | 17 | 13 |

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9.	The receptacle chamber should not be too wide to allow lateral or forward movement of the receptacle. It should be placed in a fixed spot so as to ensure that the aperture in the squatting plate is just over the centre of the receptacle. Fixed place can be ensured by making a slight depression of the size of the receptacle in the floor with smooth slanting sidings so that the receptacle may get fitted into the cavity and water if any accumulated can be wiped out conveniently. The depression should not be deeper than half an inch.	17	13
10.	Providing of receptacles in public latrines should be the responsibility of the local bodies.	17	13
11.	Bigger receptacles so as to cater to the needs of the place should be provided in public latrines, private latrines of big 'chawls' 'katras' or houses having large number of people.	17	13
12.	The number of public latrines should conform to the demand for them in the area on the basis of their usage. It is desirable to prescribe a standard proportion to the population of the area and conform to it.	17	13
13.	The structure of latrines where no receptacle can be placed at present should be got changed so as to make provision for a receptacle. This would not be costly and would not require much change.	17	13
14.	As far as possible, all public buildings like offices, schools, hospitals etc., should have flush-out latrines failing which septic-tank latrines or aqua-prives be provided. But where this is not possible, it should be ensured that standardized receptacles are provided. Hotel owners and owners of places where large number of people stay should also follow this practice.	17	14
15.	Wherever new buildings, colonies or townships are built by Government or with Government aid or by local bodies and in all industrial housing programmes, the latrines must be of sanitary types.	17	14

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	<i>Night-soil, Urine and ablution water to remain separate</i>		
16.	It would be better if the latrines are so modified as to ensure keeping night-soil and urine or ablution water separate. This can be done by having a slope in front of the seat so that urine is not mixed with night-soil. An additional step may be provided side by side so that the squatter shifts to the third step for purpose of washing.	18	14
	<i>The Scraper</i>		
17.	It should be obligatory to use a standardized scraper which should be supplied by the local bodies to their employees and not left to the scavengers themselves.	19	14
18.	In case of private scavengers, the local bodies should supply the standardized scraper directly or through licensed dealers at no-profit-no-loss basis and it should be made obligatory to use such a scraper.	19	14
19.	The scraper should be of iron sheet or M.S. plates with a long handle at one end and a semi-curve at the other end. The sheet or plate should be of a suitable gauge so that it may not break while collecting the night-soil. The corners of the plate should be rounded.	19	19
20.	It should be the duty of the scavenger and the area sanitary inspector to ensure that broken or damaged scrapers are replaced immediately.	19	19
	<i>The Rubber Gloves</i>		
21.	Efforts should be made to encourage the use of rubber gloves, particularly at the pail-depots and dumping grounds.	20	19
	<i>The Head load</i>		
22.	Carrying of night-soil in basket, 'tasla' and drum etc., as head load should be prohibited by law and made an offence.	21	19
23.	For stopping carrying of night-soil as head load, persuasive methods should also be adopted and they can be more effective than legislation.	21	19

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<i>The Bucket</i>			
24.	In narrow lanes or lanes which are unpaved or have ups and downs, wheel barrows cannot ply conveniently and cannot be taken right up to the latrine seat. For such cases, there is no alternative but to introduce buckets. The bucket when full can be carried to the wheel barrow standing nearby.	22	9
25.	In narrow lanes or roads of varying altitude, means like Kawaṛ also known as Kawath, Kawad or Bengi may be used.	22	21
26.	The local bodies should supply small buckets of not more than 2 to 3 gallons capacity, painted with coal-tar to its employees.	22	21
27.	The lid of the bucket should be fixed with hinges as otherwise this is either thrown away or not used. The lid should be collapsible.	22	21
28.	Private scavengers should also be compelled to use small covered buckets which can be supplied to them by the local bodies on no-profit-no-loss basis.	22	21
29.	The broken or damaged buckets should be replaced immediately.	22	21
<i>The Cess-pools</i>			
30.	Collection of night-soil in cess-pools is most insanitary and the inhuman ill use of scavengers engaged in cleaning them should be stopped.	23	22
31.	The contents of cess-pools must not be carried as head load.	23	22
32.	Cess-pools maintained by local bodies particularly those attached to public latrines, should not be allowed to continue. All the pail-depots where night-soil is collected in big drums should be closed down.	23	22
33.	Abolition of cess-pools in private houses is likely to take sometime. As long as these are in existence, the local bodies must introduce mechanical devices for cleaning them periodically. There should be a suction system.	23	22

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34.	In no case the contents of cess-pools should be removed by hand but only through mechanical devices.	23	22
35.	Wherever feasible, lorries like Scampers should be introduced for sucking the contents of the cess-pools.	23	22
36.	Lorries fitted with suction pump can be made use of.	23	22
37.	Corporations or big municipalities or such local bodies as may afford, should think seriously in terms of introducing vacuum cars/lorries etc., as used in Japan for cleansing cess-pools.	23	22
<i>Washing of latrines</i>			
38.	It should be ensured that latrines are washed properly and regularly.	24	22
39.	The scavengers should be given access to latrines.	24	22
CHAPTER THREE			
<i>Transportation of Night-soil</i>			
40.	After collection, night-soil is taken in basket, 'tasla' drum etc., either as head load or waist load to the pail-depot, carriage van or the place of disposal. This is most inhuman. The entire process of carrying night-soil as head load or waist load which is the root cause of all the troubles, has to be revolutionised.	25	24
41.	For putting an end to the practice of carrying night-soil as head load or waist load, wheel barrows should be introduced.	25	24
42.	The bullock or bhensa carts used for transporting night-soil are most insanitary and deserve to be abolished at once.	26	24
43.	The man-drawn carts for carrying night-soil are an insult to human dignity and must be abolished.	26	24
44.	There are various other types of carts drawn by bullocks which are all primitive. These need immediate replacement.	26	29

Serial No.	Recommendation/Suggestion	Reference	
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45.	The open trucks are as bad as bullock carts. These should be discouraged.	26	29
46.	The local bodies should introduce improved types of night-soil vans, tankers and trailers etc.	26	29
47.	Some local bodies collect night-soil in overhead tanks or big drums which have to be poured into night-soil vans for transportation. In some places, night-soil is churned and collected in pools before transportation. Such storage tanks and churning operations must not be allowed to continue.	27	33
48.	In places of over-head tanks or pools used for collecting night-soil, the scientific system of providing trailers or night-soil tankers should be encouraged.	27	33
49.	The night-soil barrels used for collection purposes should be placed at higher levels so that night-soil can be poured out right into the night-soil lorry tanker, or better still there should be a suction system.	27	33
<p style="text-align: center;">CHAPTER FOUR</p> <p style="text-align: center;"><i>Wheel Barrows</i></p>			
50.	The crude types of wheel barrows already in use in some States should be discarded.	28	43
51.	Some States are using drum wheel barrows of 15 to 40 gallons capacity. Such wheel barrows need replacement with better designs.	28	43
52.	The design of wheel barrow as given in figure No. 49 is considered to be most useful, the introduction of which would facilitate the work of scavengers. This design could, however, be modified or improved in the light of local conditions.	28	45
53.	The frame of wheel barrow should be all steel one with solid rubber tyre wheels with ball bearings. There should be two pails in the wheel barrow. The pails should not be of more than 5 gallons capacity each and the combined capacity of both the pails should not exceed the capacity of 8 gallons when full. The lids of the pails should be collapsible and	28	45

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	fixed with hinges to the body of the pails. The bottom of the pails should be such that night-soil does not stick.		
54.	Even women scavengers would not resist the use of such light wheel barrows. At some places, women have already taken up to wheel barrows.	28	45
55.	The design of wheel barrow proposed would not normally cost more than Rs. 100 to Rs. 120 if made locally or Rs. 120 to Rs. 140 if imported from any other State.	28	45
56.	The manufacture of the proposed type of wheel barrow on a large scale for requirements throughout a State could be centralised to some place for distribution to all local bodies in which case the cost of wheel barrow would definitely come further down and the design will conform to the required pattern uniformly.	28	45
57.	A few of the municipalities are using wheel barrows with 4 pails. Such wheel barrow costs Rs. 175 to Rs. 200. These wheel barrows are quite heavy and the scavengers using them complained of their weight. Such wheel barrows can be used by men only and not women.	28	45
58.	Wherever necessary, some administrative adjustments may be carried out. Men may do the pushing and women the cleaning. The wheel barrows may be kept moving from house to house along with the women workers.	28	45
59.	For places where wheel barrows cannot ply conveniently, Kawath also known as Kavar, Kawad or Bengi may be used. Two pails each of 4 to 5 gallons capacity hanging at either end of a bamboo pole at a distance of about 6 feet or so and may be carried on shoulder like the milk cans which are found convenient in such cases. An iron hook at either end may also be fitted to the pole.	29	45
60.	The main difficulty in popularising the introduction of wheel barrows is the passive attitude of scavengers. This requires tactful handling. The local authorities should make a beginning with a few intelligent scavengers	30	45-46

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	and with the assistance of non-official organisations and social workers, persuade scavengers to use wheel barrows.		
61.	To begin with, only a few wheel barrows may be put into use on an experimental basis and on their becoming popular, more wheel barrows may be pushed in.	30	46
62.	The Public Health Officers can by persuasion and by amending the bye-laws etc., achieve substantial measure of success.	30	46
63.	Even the local bodies which have plans for underground drainage system. must take up the scheme of wheel barrows without further delay.	30	46
64.	The number of wheel barrows can be reduced with the extension of the underground drainage line.	30	46
65.	For transporting night-soil, the bullock carts, bhensa carts, donkey gangs etc., which are used at present should be replaced with tractors and trailers or such other mechanical vehicles.	31	47
66.	In places where the trailers may not be convenient to ply, the local authorities may make use of three-wheelers. The intake capacity of the three-wheelers is quite good and these can ply in narrow streets easily.	31	47
67.	The trailers must be placed at places within easy approach of scavengers and where these are needed more.	31	47
	The entire process of dealing with night-soil from latrine to places of disposal would thus involve—		
	(a) collecting of night-soil from receptacle under the latrine-seat with a proper scraper into the pail of a wheel barrow or a bucket provided with a collapsible lid where wheel barrow cannot ply;		
	(b) emptying of bucket into the pail of wheel barrow;		
	(c) carrying of wheel barrow to the trailer or pail-depot wherever it is in use and emptying the pails into the trailer etc.; and		
	(d) drawing of trailer by the tractor to the dumping ground or the place of disposal.		

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<i>Financial Aspects</i>			
68.	For the administration of various schemes, the main burden will have to be borne by the local bodies concerned with or without the assistance from the State Governments. They will have to make necessary adjustments and provisions in their bye-laws, rules etc.	32	47
69.	The State Governments will have to ensure that their local bodies agree to adopt the measures uniformly throughout the State.	32	47
70.	For purchase of wheel barrows, the local bodies find it difficult to find out adequate financial resources. The best course would be for Government of India to meet the entire cost towards the purchase of wheel barrows; failing which : (a) the poorest local bodies should be given 100% assistance — 75% to be given by the Central Government and 25% by the State Government — the entire amount to be treated as grant; (b) for medium local bodies, the Government's grant can be 75% — 50% to be given by the Central Government and 25% by the State Governments and the local body to contribute only the remaining 25% from its own resources; (c) for the bigger municipalities and corporations etc., the Government of India's assistance should be 50%, the rest to be borne by the local body alone or by the local body and the State Government concerned together. The Union Territories being under the administrative control of the Central Government, the entire expenditure on schemes is borne by the Central Government. Being so, the Union Administrations are supposed to take a lead in the abolition of carrying night-soil as head loads.	32	48
		32	49
71.	In all cases where the local bodies concerned need loans for meeting their share of expenditure, the State Governments should help the local bodies by advancing loans to them	33	49

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72.	For purchase of other mechanical equipments like tractors and trailers or vans etc., the State Governments should find the fund which may be advanced to the local bodies as grants wherever possible or otherwise in the form of loans. If possible, necessary funds may also be found from the agricultural programmes for converting night-soil into manure. If the Ministry of Health provides any funds for such purpose that may be made use of.	33	49
73.	The local bodies should earmark a fixed percentage out of their annual budgets for the improvement of scavenging conditions and the living conditions of scavengers.	34	49
74.	Wherever wheel barrows are supplied to private scavengers, it should be the responsibility of the local body to watch the proper use and maintenance of the wheel barrows through the area sanitary inspectors.	35	50
<i>Long-handled Brooms</i>			
75.	Long-handled broom with a small 'Khurpi' (flat scraper) fixed at the other end for scraping purposes would be found very convenient.	36	50
CHAPTER FIVE			
<i>Implements</i>			
76.	Implements' allowance — Instead of giving implements' allowance to scavengers, local bodies should supply all the necessary and proper implements to their employees to carry out their duties.	37	51
77.	Besides the implements suggested by the Committee, the Public Health Officers should apply their minds to the problem and think about the continuous improvements of implements.	37	51
78.	The local bodies by adopting necessary bye-laws should see that even private scavengers are equipped with necessary implements for use.	37	51

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CHAPTER SIX

Night-Soil Depots

79.	The number of pail-depots must be increased according to the needs. The pail-depots should be constructed at places where it is convenient and within easy reach of the scavengers.	40	52-53
80.	In towns where due to over-crowding there is no place for constructing additional pail-depots, there trailers can be used more conveniently. These can be stationed at suitable places and taken away with the help of a tractor at periodical intervals.	40	53
81.	The existing conditions of the night-soil pail-depots and the scavengers working there are extremely unsatisfactory and deserve the immediate attention of the local bodies.	40	53
82.	The work at pail-depots must be carried out in hygienic conditions and efforts should be made to ensure that the scavengers avoid bodily touch with night-soil and rubbish.	42	54
83.	Cess-pools for storing night-soil before transportation should not be allowed to continue.	42	54
84.	The workers at night-soil-pail-depots must be provided with gum-boots, gloves, aprons, water-proof headgears, long spades and rakes etc., for pulling out cloth pieces etc., and avoid clogging.	42	54
85.	The structure of such depots where perforce, the scavengers have to wade through night-soil must be altered. Provision of trailers can minimise the difficulty to a great extent.	42	54
86.	The depots may be so constructed as to allow the trailers to clear the load in the mouth of the depot itself.	42	54-55
87.	In case of dry pail-depots, platforms of proper height with a sloping siding at either ends just like railway platforms must be constructed so that the wheel barrows can be brought with ease over the platform and poured into the standing trailer.	42	55

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88.	At every pail-depot, there must be an attendant. It should be his duty to handle the load at the depot.	42	55
<i>Amenities at Pail-Depots</i>			
89.	At every pail-depot arrangements for the supply of sufficient water for washing the vehicles, wheel barrows, drums, the depot etc., and for scavengers to bathe and wash their clothes must be provided.	43	55
90.	There may be separate bath-rooms for men and women. A set for each can be sufficient in most of the cases. The number may be increased if necessary.	43	55
91.	Wherever possible, arrangements for changing clothes before and after the work should be provided.	43	55
<i>Disinfection Stations</i>			
92.	Corporations, big municipalities and such other local bodies as can afford, should establish disinfection stations where clothes of the scavengers may be given steam treatment. The local bodies may extend the benefit to others such as labourers, hospitals etc., also.	44	55-56
93.	Wherever the scavengers do not find it convenient to keep the wheel barrows etc., at the places of their residences, arrangements for keeping the wheel barrows at the pail-depots may be made. Their cleanliness can also be ensured.	45	56
<i>Persons working in Gutters</i>			
94.	For cleaning underground sewers, use should be made of mechanical devices already in vogue in big towns. Safety of the life of persons working in gutters should be ensured and such implements, apparels, masks, etc., as may be considered necessary provided to them.	46	56
<i>Dumping Grounds</i>			
95.	Dumping grounds should be as far away from the towns as possible. Where towns have	48	57

CHAPTER SEVEN

Dumping Grounds

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	extended, dumping grounds should be shifted further beyond.		
96.	The size of the dumping ground should be sufficient so as to meet the requirements.	48	57
97.	All the night-soil and refuse of the town should be brought to the dumping ground. This would increase the income from the sale of manure.	48	58
98.	To collect all the night-soil and refuse from the town, proper vehicles for transport should be supplied and vigilance maintained to see that no night-soil is wasted by the scavengers or members of the public.	48	58
99.	As at present, most of the dumping grounds are running at loss. With the exception of a few isolated cases, the position need not be so tight and there is no reason why the entire business should not be turned into a profit making one and at least the cost of maintenance be realised.	48	58
100.	To suppress the stink and nuisance of flies at dumping grounds, use of the Swingfog or the Gammaxine Powder or any such other useful chemical must be made by the local bodies.	48	59
<i>Workers at Dumping Grounds</i>			
101.	Long gum-boots (up to the knee) are an absolute necessity for workers at the dumping grounds. They must be provided with gloves as well. An apron would also protect the clothes. Necessary implements for use should be given to the workers. They should be supplied with working uniforms and headgears.	49	60
102.	The extra allowance of a rupee or so given by some of the local bodies to workers at dumping grounds does not meet the requirements.	49	60
103.	At all dumping grounds, arrangements for the supply of sufficient water for washing vans, pails etc., and for scavengers to take their bath and wash their clothes must be made.	49	60
104.	Construction of a few bath rooms would be very useful.	49	60

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105.	For cleaning the vans etc., overhead water tanks and hoses can be more useful. The ground underneath should preferably be cemented.	49	60
106.	At places where water supply is scarce, the local authorities must endeavour to supply as much water as possible. Digging of a well at the site may solve the problem to some extent.	49	60
107.	In rocky areas, a well is not a practical solution. There the local bodies should make arrangements for bringing water in vans and storing in overhead tanks etc.	49	60
108.	Somehow or the other, water must be made available at the dumping grounds.	49	60
109.	Supply of soap at dumping grounds and also at pail-depots is essential.	49	60
110.	Arrangements for liquid soap or soap cakes may be made wherever possible.	49	60
111.	Shelters may be provided at the dumping grounds under which the workers may rest during sun or rain.	49	60
112.	Other amenities like place for changing clothes, medical aid etc., can be considered wherever possible. Big local bodies at least should do this.	49	60
<i>Agricultural Fields</i>			
113.	In some parts of the country, people do not like to make use of night-soil for manuring purposes and there all the night-soil goes waste. To popularise the use of night-soil local bodies should attach agricultural fields to the dumping grounds. The manure prepared may be utilized in those fields which would serve as a model to others. It would also be a paying proposition to the local bodies.	50	60-61
<i>Composting</i>			
114.	The local bodies should ensure proper composting in the shortest possible time.	51	61
<i>Gram Laxmi Gas Plant</i>			
115.	The use of Gram Laxmi Gas Plant may be made in villages and towns where there are	52	61-62

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	no agricultural fields or where no use of night-soil manure is possible.		
	<i>Cooperative Societies</i>		
116.	The local authorities may consider the possibilities of establishing cooperative societies for the purchase and sale of compost.	53	62
117.	If cooperative societies of scavengers come forward they should be encouraged.	53	62
	<i>Private Dumping Grounds</i>		
118.	No private dumping grounds should be allowed to continue.	54	62
119.	Cleaning of night-soil and refuse from the town and its proper disposal is the primary responsibility of the local bodies and should be well looked after by them.	54	62
120.	So long as customary rights are not abolished, the local bodies should ensure proper treatment of the night-soil at the private dumping grounds.	54	62
121.	Efforts should be made to improve the conditions of work and workers at private dumping grounds.	54	62
122.	If necessary, bye-laws and necessary legislation for the proper maintenance of private dumping grounds in the interest of sanitation should be passed and strictly enforced.	54	62
123.	Some local bodies have already got some bye-laws etc., which in many cases, are rarely implemented. There is great necessity for enforcing the municipal bye-laws and regulations strictly.	54	62
CHAPTER EIGHT			
	<i>Underground Drainage</i>		
124.	At least in all the towns already having some underground drainage system, the local bodies should make serious efforts to extend the lines so as to cover the entire towns.	55	63
125.	In towns which are expanding rapidly, local bodies should make serious efforts to lay the underground sewers in all new colonies	55	63

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	side by side with the provision of other amenities.		
	<i>Sewage Disposal Plants</i>		
126.	Local bodies should make use of Sewage Disposal Plants. They may follow the Madurai experiment for use and disposal of sewage of the town.	57	64
127.	Local bodies can depute their officers to study the working of the farm at Madurai and adopt similar methods with improvements, if any, in their own towns.	57	64
128.	After consulting experts, growth of vegetables etc., on such farms may be encouraged.	57	64
	<i>Financial Aspects</i>		
129.	A specific amount must be earmarked for the underground drainage schemes separately and at least 1/3rd of the total allocations of the National Water Supply and Drainage Schemes should be earmarked for drainage schemes.	58	64
	<i>Grant of Subsidy</i>		
130.	Several towns have underground drainage schemes only on paper. Funds are not forthcoming. Such schemes are not workable without adequate subsidy from the Centre or the State Governments.	59	64
131.	The Central Government must also give liberal subsidy to States.	59	64
132.	The Ministry of Health may examine the possibility of giving subsidy under their Health and Sanitation Schemes.	59	64
133.	State Governments which do not give any subsidy to their local bodies as yet must make necessary provisions for the purpose.	59	64
	<i>Connections with Underground Drainage System</i>		
134.	In areas served with sewers, it should be made obligatory to connect house latrines with them. Defaulters should be dealt with properly.	60	65

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<i>Conversion of dry-latrines Grant of Loan/Subsidy</i>			
135.	There are people who due to their poor financial position are not able to convert their dry latrines into water borne ones. For such people, local bodies should give loan/subsidy to house owners according to income slabs, or in the light of local conditions.	60	66
136.	The Central Government should also give aid to State Governments by giving adequate assistance.	60	66
137.	Wherever underground sewers have already been laid or are being laid, latrines must be converted into flush-out latrines and in places where flush-out latrines are not possible, latrines like septic-tanks, aqua-privies etc., may be adopted.	60	66
<i>Rebate in Taxes</i>			
138.	The local bodies may examine the possibility of allowing some rebate in house, latrine tax etc., to such of the parties who may like to convert their dry latrines into water-borne etc.	61	66
139.	The rebate given at present is insufficient but should be raised so as to induce sufficient number of people to convert their latrines.	61	66
<i>Surface Drains</i>			
140.	As long as surface drains exist, arrangements for keeping them clean should continue. A set of two persons—a cleaner and a bhishti—may be very useful.	62	67
141.	The cleaners should have proper implements with them.	62	67
142.	Wherever necessary, open surface drains should be covered.	62	67
143.	There should be a short phased programme to make surface drains 'pucca' and at least by the end of the Third Five Year Plan, all the surface drains must be made 'pucca'. These should be so constructed as to enable the water to flow easily and not stagnate.	62	67
144.	Drains should be washed daily.	62	67

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145.	Sullage water from drains can be very well utilised in agricultural fields.	62	67
146.	In towns where water supply is not sufficient, other arrangements for keeping the drains clean should be made.	62	67

CHAPTER NINE

Design of Latrines

147.	People must be educated and persuaded to construct latrines in their houses. The local bodies should pass bye-laws for having latrines compulsorily and the plans for construction of new houses should not be passed unless and until there is a provision of a sanitary latrine.	63	68
148.	Bye-laws should also be passed for compelling owners of the existing houses which are without latrines to construct latrines.	63	68

Public Latrines

149.	The number of public latrines should be increased keeping in view the demand for them.	63	69
150.	In places of congestion where these are needed, the number of latrines should be increased.	63	69
151.	Underground water-borne latrines at the cross roads would be found convenient.	63	69
152.	As long as all the public latrines cannot be converted into water-borne ones, they should at least be made fly-proof. This would also prevent pig entry.	65	71
153.	The local bodies should give serious thought to the models of public latrines. Primitive latrines must be remodelled and more sanitary latrines adopted.	67	72
154.	As far as possible, public latrines should be water-borne with arrangements for the automatic flow of water after periodical intervals.	67	72
155.	Public latrines should be constructed in the most crowded localities and places within easy reach. Latrines constructed at remote or far	67	72-73

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	off places are not likely to be of much use and whenever these are used, these are misused.		
156.	Wherever possible, latrines should be built on a large scale underground.	67	73
	<i>Private Latrines</i>		
157.	Roof-latrines as in Punjab must be brought down. Bye-laws should be framed that in new buildings roof-latrines are not allowed. Efforts should be made through legislation etc., or persuasion to bring down existing roof-latrines. Wherever space is available, sanitary latrines be constructed otherwise standardized receptacles should be made use of.	68	73
158.	Even roof-latrines may be converted into water-borne ones and connected with underground sewers where such sewers exist or to septic-tank which could be constructed on ground-floor. Where there is no space on the ground-floor or there are no sewers, septic-tanks may be constructed on cooperative basis at any available place in the street or where possible, just under the street itself and three or four houses may connect their latrines with them. Local bodies can help in keeping such septic-tanks clean periodically.	68	73-74
159.	All primitive latrines should be demolished. As long as these continue, no improvements in scavenging conditions can be expected. For remodelling primitive latrines, not only legislation etc., but persuasion would also be required.	69	75-76
160.	Some of the improved type of latrines suitable for towns are:— (1) Flush-out Latrine. (2) Automatic-flush-out Latrine. (3) Septic-tank Latrine. (4) Aqua-privy Latrine. (5) Leach type Latrine.	70	76
	The local bodies should adopt the type of latrine they feel can be best suited to their towns. They may improve thereon making them more suitable to their towns according to the conditions prevailing locally.		

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<i>Latrines on Market and Festival Days</i>			
161.	Wherever markets or fairs are held regularly, permanent latrines should be provided which should possibly be water-borne failing which any other improved type may be adopted. Wherever receptacles are provided, their sizes and arrangements for keeping them clean must be specified. Extra scavengers should be provided on such days. Where markets etc., are held after long intervals or where permanent latrines are not possible, temporary latrines of improved types with arrangements for extra scavengers should be made.	71	76
<i>Latrines in Rural and Semi-rural Areas</i>			
162.	Latrines should be introduced in villages also progressively and people must stop present indecent and insanitary practice of easing everywhere. It is indecent to observe a large number of people squatting all along the railway lines etc. Some of the better type of latrines suitable for rural and semi-rural areas are:— (1) 'Kucha' Trench Latrine. (2) 'Pucca' Trench Latrine. (3) Bore Hole Latrine. (4) Gopuri Latrine. (5) Dhanoli Type Latrine.	72	76
CHAPTER TEN			
<i>Latrines on Railways</i>			
163.	The recommendations made in respect of the removal of night-soil, providing of receptacles, conversion of dry latrines etc., may under a phased programme be also adopted by the Indian Railways as well.	75	77
164.	Where water-borne latrines are not possible, Indian Railways could construct fly-proof latrines.	75	77
165.	Indian Railways have resources and technical talent to provide an abject lesson to the whole country in the matter of construction of various types of sanitary latrines. This would play a great psychological role on the minds	75	78

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of lakhs of people who see and use them daily throughout the country.

CHAPTER ELEVEN

Customary Rights

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|------|---|----|----|
| 166. | Private scavengers have customary rights not only for cleaning latrines in certain localities but at some places over the possession and disposal of night-soil also. Such customary rights must not in any case be allowed to continue and be abrogated immediately. | 78 | 80 |
| 167. | The local bodies should pay reasonable compensation in cash to such of the scavengers who might be affected and do not get employment due to aquisition of customary rights. | 85 | 83 |
| 168. | The Governments at the Centre and State should come forward to finance such of the local bodies who are not in a position to pay reasonable compensation. | 85 | 83 |
| 169. | Wherever cash compensation is not possible, or the local bodies cannot offer employment under them, the affected scavengers must be taken in other services. | 86 | 83 |

Most of the scavengers would be prepared to forego their customary rights if provided with municipal services.

Scavenging Cess

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|------|--|----|----|
| 170. | In places where there is no scavenging cess, such a cess should be levied and the scavenging services municipalised. The scavenging cess should be so adjusted that scavenging services may become almost self-supporting. | 88 | 83 |
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L. S. G. Departments

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| 171. | It should be duty of the Local Self-Government Departments to initiate necessary legislation for the aquisition of customary rights. They should handle the problem at the State level through their legislature and ensure that a uniform policy is adopted by all the local bodies and fully implemented. | 89 | 84 |
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<i>Small Committees to be Appointed</i>			
172.	The State Governments and Union Administrations should appoint small committees to go into the whole question of the abolition of customary rights. They should not merely study the legal aspects but go thoroughly into other problems as well connected with it. They should draw up a phased programme for the abolition of customary rights and see that the work is completed as soon as possible but not later than a fixed target date. They should determine the basis, mode of payment and the amount etc.	90	84
173.	Negotiations and mutual agreements between the local bodies and scavengers can bring in the desired effects. The local authorities would be well advised to tackle the problem in a friendly and persuasive manner. Cooperation of non-official organisations and social workers interested in welfare of scavengers may also be enlisted.	91	84

CHAPTER THIRTEEN

समयमव जयते

Administrative Set Up

174.	The problem of improving the scavenging conditions should be dealt with by the Local Self-Government Departments of the States/ Union Administrations or such other Departments as may be concerned with it.	112	93
175.	All the necessary legislation, policy, directive principles etc., should be issued by the Local Self-Government Departments and they should evolve a machinery to ensure the implementation of their directives etc., fully and properly through the local bodies and such of their officers as they may like to appoint. Mere enacting of legislation or issuing directives would not be so much helpful as their proper implementation.	112	93
176.	The State Governments/Union Administrations should appoint Special Officers exclusively to look after the problems of scavenging and scavengers.	113	94

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<i>Need for Central Officer</i>			
177.	The Central Government must appoint an Officer having the necessary background knowledge of the various problems of scavenging and scavengers in the country at the Centre to deal with these problems and watch their day to day development.	114	95
178.	A small Vigilance Committee consisting of non-officials who are well acquainted with the magnitude of the problem and have shown serious interest in tackling it, should be appointed by the Ministry of Home Affairs to move about from State to State, meet and discuss with officials, social workers and members of the public about the urgency of the problem and mobilise their efforts for solving it.	114	95
179.	The Ministry of Home Affairs who are concerned with the welfare of Scheduled Castes should initiate legislation for the abolition of customary rights, if necessary.	114	95
180.	The ceiling for water supply and drainage schemes should be fixed separately. The ceiling for drainage scheme is too small in comparison to the cost and requirements of this scheme. The Ministry of Health should consider increasing this ceiling.	115	95
181.	The Ministry of Health may consider giving some grants/loans to be recovered in convenient instalments to the local bodies through State Governments for the purchase of vehicles etc., for transportation of night-soil and town refuse.	115	95-96
182.	The Ministry of Food and Agriculture (Agriculture Department) may also consider what possible help they can give for converting night-soil into manure under agricultural programmes.	116	96
183.	The State Governments/Union Administrations should help their local bodies technically, financially and otherwise.	117	96
184.	The Cooperation Department of the Ministry of Community Development and Cooperation can also tender their advice and start some of the schemes if possible for the welfare of scavengers particularly those who	118	96

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	may be affected due to abolition of customary rights, and also help in the collection, preparation and sale etc., of the manure on a cooperative basis.		
CHAPTER FOURTEEN			
<i>Some General Aspects</i>			
Though the question of the improvement of the living conditions and environment of scavengers is beyond the scope of the terms of reference of the Committee, yet as this is an important aspect having direct bearing on the problem, some suggestions have been made which require urgent attention.			
<i>Housing</i>			
185.	Quarters for conservancy staff should be as near their places of work as possible but never around the pail-depots, morgues, public latrines, dumping grounds etc. Such location of scavenger's quarters at such places amounts to criminal neglect. A few quarters here and a few there may be built in colonies inhabited by others as well so as to avoid segregation and give an impression of a mixed colony.	121	98
186.	It is of primary importance that the housing conditions of scavengers are radically improved. This would create a new sense of self to respect in them and particularly their children.	121	98
187.	For the welfare of scavengers, maximum use of the Slum Clearance Schemes should be made. It is necessary to have a special provision in the plan under the Works and Housing Ministry for providing houses to the conservancy staff of the local bodies.	122	101
188.	The Low Income Housing Scheme—The local bodies should construct houses for scavengers under the Low Income Housing Scheme and as far as possible pass on the quarters to them on Hire Purchase system.	123	101
189.	Leaving aside the schemes under the Slum Clearance and Low Income Housing	123	101

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	Schemes, it would be advisable for the local bodies to construct houses for scavengers and give them on Hire Purchase System. This would enable the scavengers to own their houses after sometime and live in them permanently.		
190.	One-room tenements are not adequate. Scavengers have large families and even taking an average of five members per family, one-room tenements are too small. From the point of view of moral hygiene also every tenement must make provision for two living rooms. A kitchen, a bathroom, a latrine—flush-out or any other sanitary type like septic-tank etc., built-up cupboard, a slightly raised platform for fire place with a hood and chimney over it and possibly a hollow underneath for storing fuel and a verandah should be provided. Wherever possible, electricity must also be provided. Water supply is necessity.	123	102
191.	The quarters need not necessarily be completely 'pucca' and wherever the cost is on the high side, these may be 'semi-pucca' as well. The cost of each tenement for such quarters which are not to be owned by the scavengers on Hire Purchase System, etc., may vary from Rs. 1,200 to Rs. 2,000 on the lines of the quarters built in Madras under Slum Clearance Schemes.	123	102
192.	It is very important that amenities like primary school, a welfare centre with a community hall which may be used as community centre, medical facilities etc., are provided in large colonies. A social worker should invariably be provided to be incharge of the welfare activities. There is a need for appointing a social worker for covering a population of 100 families.	123	102
<i>Conditions of Service</i>			
193.	At present, conditions of service in different states are far below the minimum needs which is the principal reason for discontentment amongst scavengers. The better the service and working conditions, better would	124	102

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	be the relations between the scavengers and the local bodies.		
	<i>Wages</i>		
194.	Wages should be paid to scavengers according to the Minimum Wages Act.	125	102
195.	The State Governments Union Administrations who have not done it so far, must appoint small committees to go into the whole question of wages and payment of other allowances to scavengers and suggest basic wages which should however, not fall below the minimum wages. Question of payment of other allowances as may be admissible to scavengers must also be considered.	125	103
	<i>Unclean Work Allowance</i>		
196.	Unclean Work Allowance should not be in cash but in the form of extra amenities such as gloves, water etc., to make the occupation more clean. Extra allowance paid in cash is not utilised properly and the work remains unclean. Such a terminology should not be used. Unclean Work Allowance can very well be called like any other ordinary allowance.	126	103
	<i>Distribution of Wages</i>		
197.	Wages should be distributed in the presence of a responsible officer of the local body who should ensure that no creditors are allowed to throng the premises and harass the scavengers. Such an officer should also keep an eye on the supervisory staff of the local bodies directly in touch with the scavengers and who are often alleged to accept illegal gratifications.	127	103
	<i>Hours of Work</i>		
198.	For full time employees, the hours of work should not be more than 7 hours per day of which only 4 to 5 hours may be reserved for scavenging work. Part-time worker should not be asked to work both in the morning and evening as this deprives them of any other work and causes them hardships.	128	103

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<i>Roll Call</i>			
199.	The scavengers on duty should be called only twice for roll call — once in the morning and once in the afternoon.	128	103
<i>Leave Rules</i>			
200.	Local bodies should frame leave rules and the scavengers should be given the benefit of casual, privilege, earned leave etc.	129	103
201.	Women scavengers must be given pre-natal and post-natal leave. They should be given leave in case of miscarriage etc., also.	129	103-104
<i>Off-Day in a Week</i>			
202.	State Governments/Union Administrations should see that at least in local bodies where the scavenging service is municipalised, scavengers are allowed a full day off in a week.	130	104
<i>Uniform</i>			
203.	All the local bodies should give sufficient and proper summer and winter uniforms both to male and female scavengers.	131	104
204.	Proper kit for scavengers for cleaning underground drains should be supplied.	131	104
<i>Permanency of Service</i>			
205.	Every effort should be made by the local bodies to give some security of employment to the temporary scavengers and avoid keeping them on a temporary basis for an indefinite period.	132	104
<i>Full-time and Part-time Workers</i>			
206.	Local bodies, as far as possible, should not appoint part-time scavengers. Full-time worker is bound to be more efficient.	133	104
<i>Appointment of Scavengers in other Occupations</i>			
207.	Scavengers who may like to leave their occupation should be appointed on other posts such as peons in other Departments, 'chowkidars', 'naka-walas' etc.	134	104
208.	Vocational training may be imparted to such of the scavengers who may like to settle in	134	104

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	a trade. After training some subsidy/loan may be given to them for settling in trades. They be given chances and opportunities for training as drivers, cleaners and mechanics etc., in municipal workshops and other gainful occupations.		
	<i>Water Supply</i>		
209.	Sufficient water for drinking and washing must be supplied to scavengers in or near 'basties' and at times when they return from work.	135	105
	<i>Soap</i>		
210.	Arrangements for supply of soap at the place of work like pail-depots and dumping grounds etc., should be made.	136	105
	<i>Women Workers</i>		
211.	Creches should be started in the colonies of scavengers where a paid worker preferably a trained lady worker may be appointed to look after the children. Children must be taught clean ways of living and habits so as to make them clean persons.	137	105
	<i>Community Centres</i>		
212.	There should be established community centres where care of children is combined with training of women in some crafts and adult education. Such community centres should also be used for cultural purposes and amusements etc.	138	105
	<i>Education</i>		
213.	State Governments and local bodies should ensure that children of scavengers are provided easy admissions in schools and hostels irrespective of their caste. Efforts should be made to open primary schools near their 'basties' where children of scavengers and other communities may receive education.	139	105
	<i>Occupational Diseases</i>		
214.	All State Governments etc., should conduct a medical survey and find out if the	140	105

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	scavengers suffer from any disease due to their handling night-soil. If so, proper medical arrangements for them should be made. Scavengers must at least be examined periodically.		
	<i>Name for Scavenger</i>		
215.	In order to create a healthy atmosphere and psychological background, the scavenger should not be called by the age old name. He should be known by some more decent terminology according to local conditions and language.	141	105
	<i>The Pig</i>		
216.	Rearing of pigs in any area of towns must not be allowed. If anybody wants to rear piggery he should do so on the proper lines away from towns.	142	106
	<i>Urinals for Men and Women</i>		
217.	Adequate number of urinals, preferably with automatic water arrangements, should be put at public places like bus stands, market places, parks, cinema halls, thoroughfares etc. Urinals for women must also be provided in sufficient numbers. Urinals near latrines are bound to be misused and should be avoided. Efforts should be made to equip men's urinals with Western type basins which cannot be misused.	143	106-107
	<i>Dust Bins</i>		
218.	Local bodies must provide dust bins at all suitable places which should be within easy reach and ensure their proper cleaning. The dust bins may be kept fixed on paved floors.	144	107
	<i>Legislation</i>		
219.	State Governments/Union Administrations should explore possibilities of framing rules, bye-laws etc., which they may consider necessary for the solution of various problems.	145	107
	<i>Propaganda</i>		
220.	Various process of scavenging problems such as use of defective and good latrines,	146	107

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	methods of scavenging, working at pail-depots, dumping grounds and system of carriage etc., can be filmed by the Ministry of Information and Broadcasting in consultation with the Ministry of Home Affairs and the good and bad spots in the country presented before the masses who should be educated in the use of improved methods.		
221.	The documentaries, cinema slides etc., prepared by the Films Division of the Ministry of Information and Broadcasting would be of great help in creating public opinion for improving the conditions of scavenging and those of scavengers.	146	107
222.	The Ministry of Home Affairs and the State Governments/Union Administrations should ensure that those non-official organisations who get financial assistance either from the Centre or the State Government must include schemes for the improvement of the conditions of scavenging and scavengers in their programmes. They should be asked to publish posters, leaflets etc., propagating the need for improvement of the conditions. The organisations who have got cinema vans should be asked to make use of such vans for the purpose of schemes for putting an end to the practice of carrying night-soil as head loads. Conversion of dry latrines into sanitary ones, schemes for improvement of the scavenging conditions and those of scavengers. This should be one of the compulsory schemes seeking assistance from the Centre and the States.	146	108
223.	It is essential that State Governments and the Ministries of the Government at the Centre should draw up a phased programme for implementing the various recommendations and suggestions in a systematic manner within the end of the Third Five Year Plan.	147	108

APPENDIX I
No. F. 13-118/54-LSG
Government of India
Ministry of Health

New Delhi, dated 24th September, 1955

From

SHRI A. V. VENKATASUBBAN, M.A.,
Deputy Secretary to the Government of India.

To

ALL PART 'A', 'B' AND 'C' STATE GOVERNMENTS

SUBJECT—*Report of the Scavengers' Living Conditions Enquiry Committee.*

Sir,

I am directed to say that on the recommendation of the Backward Classes Board, the Government of Bombay appointed a Committee in 1949 with Shri V. N. Barve as Chairman to study and enquire into the living conditions of the scavengers in the State of Bombay and to suggest ways and means to improve their present conditions of work and to fix their minimum wages. The said Committee submitted its report to the Government of Bombay in 1952. The Government of India presume that the Government of Madras etc., have got copies of this report which was published in 1952.

2. The Government of India feel that though the recommendations made by the Scavengers' Living Conditions Enquiry Committee, specifically relate to the Local Bodies in the State of Bombay, they are really capable of wider application and can with profit, be adopted by all the States. The Government of India, therefore, suggest that the Government of Madras etc., may take steps to implement as many recommendations of this committee.

A summary of the important recommendations made by the Scavengers' Living Conditions Enquiry Committee is enclosed. The receipt of this letter may kindly be acknowledged and the Government of India informed of the action taken in the matter in due course.

Yours faithfully,

Sd/- A. V. VENKATASUBBAN
DEPUTY SECRETARY

*Summary of the Important Recommendations of the Scavengers'
Living Conditions Enquiry Committee*

The Committee was appointed some time in 1949 and submitted its report in 1952. It relates only to the living conditions of scavengers in the State of Bombay but some of the points raised therein are of common interest to all State Governments.

(1) It may be noted with interest that Latrines with receptacles which are generally removed by scavengers came into vogue only after the establishment of Municipalities during the British regime.

(2) The caste of Bhangi as such was confined only to certain Provinces like Gujarat, Maharashtra, Karnatak. etc. It is of a very late origin. Ancestors of these Bhangis were just field labourers of a low caste but never did the work of scavenging. Some of these people took to the dirty work of cleansing the latrines for the sake of profit. Slowly this developed into a monopoly. The stage was reached when the Bhangis wanted to exploit this monopoly and a sort of customary right was thus developed. By force of habit the Bhangi lost his self-respect to such an extent that he did not consider the dirty work of cleansing latrines as a curse from which he should endeavour to extricate himself.

(3) The Committee are strongly of the opinion that the Gharaki system or the system of customary right of scavenging should be abolished both in the interest of the Bhangis and also in the interests of public sanitation. The latter reason has arisen because Bhangis who had customary rights had the upper-hand over the residents of towns and villages because they would do the cleansing work only as and when they pleased and at the same time they would not allow other scavengers to enter into their sphere of work to carry on the work in case of strikes etc. This led to a high degree of insanitation in many cases.

(4) The Committee felt that suitable measures should be taken to awaken the sanitary conscience and civic sense of the public in the matter of abolition of the process of removal of night-soil by hand by the Bhangis, and to raise culture of the Bhangis caste and made them fit to take their due share in the public life of the society.

(5) The Committee has pointed out that in certain Municipal Acts there is provision to regulate the construction, maintenance and control of water-closets, privies, latrines, etc., but there is no provision for the scavenging of public latrines. This has prevented the Municipalities from breaking the so-called customary rights of Bhangis and from improving the methods of scavenging in order to avoid the hand removal.

(6) Certain Municipal Acts, for instance in Punjab and Delhi, actually include provision for the preservation of the customary rights of scavenging private latrines. These provisions should be abrogated. (In this connection attention may be invited to our proposed legislation to amend the Punjab Municipal Act in order to do away with customary right in the Delhi City).

(7) The living conditions of scavengers are very poor. Provision of housing to Bhangis or payment of house rent to such workers who are not provided with free quarters does not find a place in all Municipal Acts. Wherever such provision has not been made the Act should be amended suitably.

(8) Provision of water for drinking or washing in the case of scavengers is very inadequate. Even where storage tanks and water taps are provided it has been found that the water supply is non-existent after certain hours with the result that the scavengers are put to a lot of suffering.

(9) The area where scavengers reside do not have any latrines. These have to be provided.

(10) The quarters and localities for scavengers are often situated in unhealthy places in the vicinity of open drain or dump grounds. This should be remedied. In view of the fact that the breaking of monopoly or customary right of scavengers will take some time, the question of housing accommodation should be tackled immediately by local bodies.

(11) There should also be provision for adequate lighting of streets and open spaces, for a play ground, for a congregational centre, for a reading

room, etc. The local bodies should be asked to pay due attention to such things in the case of scavengers also. Unless these amenities are provided slum clearance cannot really be a success.

(12) House rent should be paid to all scavengers who have neither a house of their own or who have not been provided free accommodation by local bodies.

(13) The dirtiest feature of scavenging work is the process of hand-removal of night-soil from the ordinary latrines, in which the night-soil drops down in a chamber below, where usually a basket or some other receptacle such as a pan, a bucket, etc., is placed. The Committee have recommended that such receptacle latrines should be eliminated forthwith and substituted by a type of latrines which will not involve hand-removal.

(14) Local bodies whenever they have occasion to construct new latrines should definitely avoid constructing the usual pan latrines and should construct septic-tanks or other suitable substitutes. Local bodies should also refuse permission to new house owners to construct such receptacle latrines.

(15) The Committee have also made recommendations as to the various types of latrines that can be brought into use in order to avoid this hand-removal. They have stated that the practice of carrying the night-soil baskets and drums on the head from the latrines to the night-soil cart or lorry should be prohibited. The cart or the lorry should pass along the road as the work of cleansing latrines proceeds and should keep pace with it. A wheel-barrow to which a drum of suitable size to carry night-soil with cover should be fixed and the same should be pushed by hand up to the night-soil cart or lorry; otherwise the night-soil may be carried in buckets with cover. In the case of cess-pools, a suction pump fitted to a lorry should be utilised. If this is not possible the wheel-barrow with a drum or any other device may be adopted.

(16) It may be interesting to note that the Committee have suggested that the night-soil should be used for the production of gas for street lighting, for fuel, etc. There are gas plants already manufactured in the country which can be used for this purpose. Public latrines should be so constructed that the night-soil etc., should enter special tanks built for the plant from which gas will be produced and after the gas has been yielded the remaining stuff is thrown out at the other end of the tank and would still retain its manurial value. The Committee have recommended that the potentialities of such gas plants for use in village panchayats should be examined. (In this connection it may be recalled that Mr. Thirun Narayanan of the Malaria Institute of India has already evolved a gas plant for the production of gas from cow dung and other refuse).

(17) The Committee have also recommended that five hours of scavenging work should be the maximum for each scavenger. The practice of giving off-days should also be adopted.

(18) Local bodies should provide suitable uniforms or clothing to the scavengers in their employ.

(19) A campaign must be planned by the Public Health Authorities of states, with the cooperation of local bodies and social workers for the purpose of securing improvements in the living condition of the scavengers and generally for the uplift of scavengers as members of society.

(20) The Committee have made recommendations in regard to the minimum wages which should be prescribed for scavengers. They have proposed a scale of Rs. 25—30 in the case of district municipalities with a selection grade of 15 per cent with a further time scale of Rs. 5 spread over 10 years and in the case of Notified Area Committee and Gram Panchayats a flat rate of Rs. 20 per month. The same scale of allowances as is allowed to Class IV employees

of Government should be given to the scavengers also. In certain municipalities an allowance called an unclean work allowance is also given. This allowance should be treated as part of the wages of scavengers.

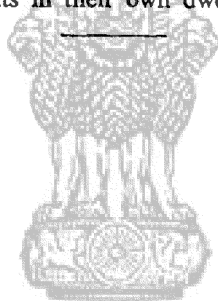
(21) If as a result of improvement in the conditions of work of the scavengers as mentioned above, some of them are thrown out of employment, it should be the duty of the local bodies to see that such persons are absorbed in other suitable kind of employment under their control.

(22) Government should appoint an Assistant to each director of local authorities in a State in order to secure the implementation of the Committee's recommendations.

(23) Local bodies, gram panchayats and other local authorities should include in their annual reports a special chapter giving details about the living conditions and the conditions of work of scavengers and sweepers in their employ and the improvements effected therein during the year under review.

(24) Cooperative Credit Societies should be organised with the help of local bodies for the use of the servants of local bodies including scavengers.

(25) Lastly the Committee have recommended that the sanitary conscience, civic sense and the sense of social justice of the people in general should be aroused by impressing upon them the importance of public sanitation and improved sanitary arrangements in their own dwellings.



सत्यमेव जयते

APPENDIX II
No. 8/43/55-BC
Government of India
Ministry of Home Affairs

New Delhi-2, the 10th October, 1956.

From

SHRI N. S. MANI, I.C.S.,

Joint Secretary to the Government of India.

To

THE CHIEF SECRETARIES TO THE GOVERNMENTS OF ALL PART A, PART B
AND PART C STATES (EXCEPT PONDICHERRY).

SUBJECT—*Report of the Backward Classes Commission—Problems of special
groups—Bhangis.*

Sir,

I am directed to invite your attention to paragraph 21 of Chapter IV of Volume I of the Backward Classes Commission's report, relating to Bhangis (Sweepers and Scavengers) and to state that the condition of Bhangis is extremely miserable and the betterment of this unfortunate section of our people is one of the crying needs of our country. When compared with the average income of the common people the earnings of the Bhangis attached to municipalities, local bodies, etc., may not perhaps be comparatively very low and yet, in fact, the condition of these people is really miserable. Drinking and gambling habits, lack of education and lower standard of living are considered to be mainly responsible for many of their ills. Housing conditions of Bhangis badly need improvement. This objective could be achieved by dispersing them in batches so as to provide clean residential accommodation for them among other sections of the people and also by giving them comprehensive training in methods of cleanliness and hygiene. This process, which may be spread over a number of years, would, to a great extent, help Bhangis to be absorbed in society. The stigma of untouchability would only then be effectively removed.

Mechanical and up-to-date methods of cleansing latrines may also have to be introduced and the inhuman practice of doing this work by hand and carrying night-soil on heads should be obviated as far as possible. Sewers, drains, etc., should be introduced on a larger scale. Bhangis, who are at present attending to scavenging work, may be encouraged to take to the preparation of compost manure which would help greater production of food grains in the country. Digging of manure pits may be subsidised by the State.

2. Construction of large numbers of wells for augmenting drinking water supplies is a dire necessity. This will also improve the hygienic and sanitary condition of Bhangis. Schemes covering every sphere of life to uplift Bhangis from their 'sub-human' level of existence can alone meet the situation.

3. Attention is invited to paragraphs 7 and 8 on pages 215-16 of part I of the report of the Commissioner for Scheduled Castes and Scheduled Tribes for the year 1955 and to the Ministry of Health letter No. F.13-118/54-LGS, dated the 24th September, 1955 in which it was suggested to the State Governments to implement as many recommendations as possible of the Scavengers' Living

Conditions Enquiry Committee, appointed by the Government of Bombay in 1949. The Government of India will be glad to be informed at an early date of the concrete steps the State Governments are at present taking or propose to take for the amelioration of the condition of Bhangis.

Yours faithfully,

Sd/- N. S. MANI

JOINT SECRETARY TO THE GOVT. OF INDIA.

Copy forwarded to the Health Ministry, the Commissioner for Scheduled Castes and Scheduled Tribes with reference to their u.o. No. 993-LSG/56, dated 24-2-56 and 6033-56, dated 9-3-56.

Copy forwarded to Public II Section.

Sd/- S. K. AYANGER

for UNDER SECRETARY TO THE GOVT. OF INDIA.

No. 19/66/56-Pub. III

Government of India

Ministry of Home Affairs

From

SHRI B. N. MAHESHWARI, I.A.S.,

Deputy Secretary to the Government of India.

To

ALL STATE GOVERNMENTS.

New Delhi-2, the 22nd December, 1956.

SUBJECT—Scavenging work—Amelioration of the conditions of sweepers (Bhangis) employed on.

Sir,

I am directed to invite a reference to the Government of India, Ministry of Health letter No. F.13-118/54-LSG, dated the 24th September, 1955, and this Ministry's letter No. 8/43/55-BC, dated the 10th October, 1956 regarding the problems of scavengers and the implementation of the recommendations made in the Barve Committee's Report on the Scavengers' Living Conditions. In view of the importance of this problem in the programme for the welfare of Harijans, the Government of India are anxious to know as to what has been done by the States in the matter of ameliorating the conditions of the scavengers in the light of the recommendations made by the Barve Committee. It is requested that this Ministry may kindly be informed urgently of the steps taken so far by the State Government in this direction.

2. It is also felt that, as a first step to make their work consistent with human dignity, wheel-barrows or hand carts could be supplied to each sweeper employed by municipalities and other local bodies on scavenging work, so that the practice of carrying night-soil in baskets or buckets (Balties) might be eliminated altogether. This requirement if left alone to the municipalities etc., might not, however, be fulfilled in the absence of adequate financial resources. The Government of India would therefore be prepared to consider any proposal to give assistance through the State Government to such of the needy municipalities

and other local bodies as may undertake to provide immediately to scavengers employed on this type of work, wheel-barrows or hand carts as may be feasible, subject to the condition that the local body concerned will have to meet 50 per cent of the expenditure themselves, with or without any assistance from the State Government, and subject to a further condition that the grant-in-aid will be admissible to only such local bodies which agree to stop this practice completely and not to those who may like to take up the scheme piecemeal.

3. In order to assess the financial implications of this scheme, we would request that the information on the following points may be furnished immediately, in no case later than January 15, 1957 :—

- (1) the number of municipalities and other local bodies in the State,
- (2) the total number of scavengers engaged on this type of work,
- (3) the names of the local bodies which would like to take up this scheme on 50 : 50 basis,
- (4) the cost involved in the purchase of the required number of hand-carts or wheel-barrows to stop the practice of carrying night-soil in baskets or buckets (Balties) completely under each local body prepared to implement this scheme on the above basis.

4. If a reply is not received from any State Government by January 15, it will be presumed that no local body in that State is either in need of help for this purpose or is willing to take up this scheme on a basis of 50 per cent matching contribution.

Yours faithfully,

Sd/- B. N. MAHESHWARI

DEPUTY SECRETARY TO THE GOVT. OF INDIA

No. 19/66/56-Pub.III.

New Delhi-2, the 22nd December, 1956.

Copy forwarded for information to :

1. Ministry of Health.
2. B. C. Section (Ministry of Home Affairs).

Sd/- D. NATARAJAN

UNDER SECRETARY TO THE GOVT. OF INDIA.

No. 24/7/59-SCT III

Government of India

Ministry of Home Affairs

From

SHRI L. O. JOSHI, I.A.S.,

Deputy Secretary to the Govt. of India.

To

ALL STATE GOVTS. (NOT TO U.Ts.).

New Delhi-2, the 30th July, 1959.

8th Sravan, 1881.

SUBJECT—*Grant-in-aid to Municipalities, Local Bodies for the purchase of hand carts/wheel barrows for sweepers (Bhangis) employed on scavenging work.*

Sir,

I am directed to refer to this Ministry's letter No. 19/66/56-Pub.III, dated the 22nd December, 1956, on the subject of amelioration of the conditions of

sweepers employed on scavenging work. It was stated in that letter that as a first step to make their work consistent with human dignity, wheel barrows could be supplied to each sweeper employed by municipality and other local bodies on scavenging work, so that the practice of carrying night-soil in baskets or buckets (as head loads) might be eliminated altogether. It was felt that this requirement, if left alone to the municipalities, etc., might not, however, be fulfilled in the absence of adequate financial resources. The State Governments were therefore informed that Government of India would be prepared to consider any proposal to give assistance through them to such of the needy municipalities and other local bodies as might undertake to provide immediately to scavengers employed on this type of work, wheel barrows or hand carts, as may be feasible, subject to the condition that the local body concerned would have to meet 50 per cent of the expenditure themselves, with or without any assistance from the State Government and subject to a further condition that the grant-in-aid will be admissible to only such local bodies which agreed to stop this practice completely and not to those who may like to take up the scheme piecemeal. In spite of the financial assistance assured by the Government of India, the response from the States has been very discouraging and demands totalling only Rs. 16 lakhs have been received from all over the country during the last two years.

2. This matter was also considered by the Estimates Committee of the Lok Sabha and the Committee in their 48th Report pertaining to the Welfare of Scheduled Castes, Scheduled Tribes and Other Backward Classes have made the following recommendations on the above subject :—

- (1) The Ministry of Home Affairs should take lively interest and should impress upon the State Municipalities and local bodies that it is of utmost urgency that the practice of carrying night-soil as head loads be eliminated within the shortest possible time.
- (2) Such municipalities and local bodies who for various financial and other reasons, may not be able immediately to change over completely from the practice of carrying night-soil on head to that of removing it in hand carts or wheel barrows, but may be ready to introduce the scheme gradually, should be encouraged and allowed financial aid.

3. Government of India share the anxiety expressed by the Estimates Committee and seek whole hearted cooperation of the State Governments on whom rests the responsibility of the implementation of the scheme, so that effective steps are taken and an adequate programme is prepared for eliminating this inhuman practice within the shortest possible time. To provide encouragement to the municipalities, etc., the Government of India have also accepted the second recommendation of the Estimates Committee mentioned above, subject to the condition that the local bodies, will, at any rate, prepare a phased programme to completely stop this practice within a period not exceeding five years.

4. In this context, it is suggested that the State Department I/C of Harijan Welfare should in consultation and coordination with the Department I/C Local Self Government and others concerned prepare a programme to eliminate this practice throughout the State within a reasonable period and implement this programme vigorously. Otherwise, it would just consist of sporadic efforts of certain local bodies and the stigma attaching to this practice will continue for an indefinite period.

5. The State Governments have already been requested in this Ministry's letter No. 20/21/59-SCT III, dated the 12th May, 1959, for forwarding their proposals for grant-in-aid for 1959-60. So far proposals have been received from only one or two State Governments. It is requested that very early steps may now kindly be taken (a) to prepare a comprehensive programme and (b)

to put up this year's requirements to the Government of India without further loss of time.

The receipt of this letter may kindly be acknowledged.

Yours faithfully,

Sd/- L. O. JOSHI

DEPUTY SECRETARY TO THE GOVT. OF INDIA

No. 24/7/59-SCT.III.

New Delhi-2, the 30th July, 1959.

8th Sravan, 1881.

Copy forwarded for information to the:—

- (1) Ministry of Health.
- (2) Planning Commission (with 6 spare copies).
- (3) Commissioner for Scheduled Castes and Scheduled Tribes (with 10 spare copies).

Sd/- L. O. JOSHI

DEPUTY SECRETARY TO THE GOVT. OF INDIA

No. 20/2/60—SCT. III

Government of India

Ministry of Home Affairs

From

SHRI L. O. JOSHI, I.A.S.,

Deputy Secretary to the Govt. of India.

To

ALL THE STATE GOVERNMENTS

New Delhi-2, the 13th April, 1960.

24th Chaitra, 1882.

SUBJECT —*Grant-in-aid to Municipalities/Local Bodies for undertaking schemes to eradicate the practice of carrying night-soil by sweepers as head load.*

Sir,

I am directed to refer to this Ministry's letter No. 24/7/59-SCT.III, dated the 30th July, 1959 in which the State Governments were informed of the decision of the Government of India that even those Municipalities/Local Bodies, who were prepared to agree to the change over gradually from the practice of carrying night-soil on head to that of removing it in hand carts or wheel barrows, would be eligible to receive financial assistance from the Central Government on 50 : 50 basis for the purchase of hand carts/wheel barrows subject to the condition that the local bodies, will, at any rate, prepare a phased programme to completely stop this practice within a period not exceeding five years.

2. So far although *ad hoc* requests have been received during 1959-60 for sanction of grants to Municipalities/Local Bodies, only one or two State Governments appear to have prepared a phased programme. As already emphasized in this Ministry's letter No. 24/7/59-SCT.III, dated the 30th July, 1959, if the

object of eliminating this inhuman practice within the shortest possible time is to be achieved, it is essential that the State Departments of Harijan Welfare should in consultation and coordination with the Department in-charge of Local Self Government and others concerned prepare a programme to eliminate this practice throughout the State within the next five years. The Conference of State Ministers in charge of Welfare of Backward Classes held in New Delhi in January, 1960, also recommended that every State should prepare a prospective plan for eliminating this practice completely.

3. The main object has all along been the complete stoppage of the practice of carrying night-soil as head load, irrespective of the fact whether the scavengers are employed by Municipalities or other local bodies or they are private scavengers. It is understood that a substantial percentage of scavengers in municipal areas carry on this work not as employees of the Municipalities but under a system under which they enjoy customary rights of cleaning the latrines in localities allotted to them. In some States this system is known as private Jagirdari system. The practice cannot, therefore, be stopped completely unless the private scavengers are also made, by persuasion or otherwise *e.g.*, compulsion under Municipal rules or bye-laws, to give up completely the practice of carrying night-soil in baskets or buckets as head loads and bring into use wheel barrows and hand carts etc., instead. The Government of India have, therefore, decided to enlarge the scope of this scheme and would be prepared to consider for financial assistance even during 1960-61 proposals whether this actual work of removal is done by municipal employees or other persons subject, however, to the existing condition that Government of India's grant will be 50 per cent of the expenditure on this scheme.

4. I am, therefore, to request that the State Government may give their urgent and earnest attention to this matter, take immediate steps to assess the extent of the problem in their respective States, prepare a phased programme to completely eliminate this inhuman practice within a period not exceeding five years and inform Government of India of the steps taken for preparing the phased programme in a comprehensive manner.

5. It is also requested that proposals for 1960-61 be sent so as to reach this Ministry not later than the middle of May, 1960. *Proposals received after this date will not be considered for 1960-61.*

6. The receipt of this letter may please be acknowledged.

Yours faithfully,

Sd/- L. O. JOSHI

DEPUTY SECRETARY TO THE GOVT. OF INDIA

No. 20/2/60-SCT.III.

Dated the 13th April, 1960.

24th Chaitra, 1882.

Copy forwarded for information to :

- (1) Ministry of Health.
- (2) Planning Commission (6 spare copies).
- (3) Commissioner for Scheduled Castes and Scheduled Tribes (with 10 spare copies).

Sd/- L. O. JOSHI

DEPUTY SECRETARY TO THE GOVT. OF INDIA

Copy to SCT.III-A Section.

APPENDIX III

No. 20/142/58-SCT-III

Government of India

Ministry of Home Affairs

From

SHRI O. K. MOORTHY,
Officer on Special Duty.

To

ALL STATE GOVERNMENTS

New Delhi-2, the 20th December, 1958.

29th Agrahayana, 1880.

SUBJECT—*Housing Schemes for scheduled castes and scheduled tribes etc.—
Provision of a Trench latrine and bath.*

Sir,

I am directed to forward for consideration of the State Governments/ Administrations a copy of a note recorded by the Deputy Home Minister suggesting the provision of sanitation facilities in the colonies to be set up for the scheduled castes and tribes and the adoption, wherever feasible of a trench latrine model (*vide* design enclosed) which is not costly and which also eliminates the need of scavenger service.

2. I am also to invite your attention to the recommendation made by the State Ministers' Conference held in February, 1958, and communicated to all the State Govts./ Administrations *vide* this Ministry's letter No. 51/58-SCT-II, dated 27th March, 1958 that there should be no colonies exclusively for Harijans and that in these colonies at least 10 per cent non-Harijans should be taken as far as possible to give them a mixed character and further that non-Harijans up to this number could be given the same facilities as are admissible to scheduled castes to encourage them to join such colonies or institutions. It is hoped that this recommendation is being followed in the colonies set up for scheduled castes.

Yours faithfully,

Sd/- O. K. MOORTHY

OFFICER ON SPECIAL DUTY

No. 20/142/58-SCT.III.

New Delhi-2, the 20th December, 1958.

29th Agrahayana, 1880.

Copy forwarded for information to the Ministry of Works, Housing and Supply, Planning Commission, Commissioner for Scheduled Castes and Scheduled Tribes.

Sd/- O. K. MOORTHY

OFFICER ON SPECIAL DUTY.

I have been visiting Centrally Sponsored Housing Scheme for Scheduled Castes in the districts of different States last one I visited was in Allahabad, Bamrauli village. The Centrally Sponsored Scheme here is to help build 30 houses to rehabilitate Harijans of nearby villages where the Central grant is 75 per cent of the cost of a house i.e. rupees seven hundred and fifty. The house plan of three rooms and a verandah lacks sanitation facilities completely. The room which is being kept for the kitchen, could have a small 'pucca' corner with a drain and a raised parapet, so that this corner could be utilised for bathing and washing clothes and utensils. On the other hand, provisions being made for bathing and washing clothes is to erect separate places for men and women nearby the well, which is very unhygienic as the water would filter down to well again. No thought has been given for the construction of latrines as the spread out fields nearby is taken for granted to be the best for these people. In our planning for the housing of these people we seem to have ignored the provision of latrines. I saw a model of a trench latrine in Allahabad in a private home, which I thought was a very good model which could be taken up in our Centrally Sponsored Schemes as the cost would be negligible and the civic sense of the people could be developed in that manner without scavenger service.

2. The tenements are good models but a bath room space is missing in them with the result that women have no privacy. There should be a little corner made inside the house where they could bathe their children and use it for themselves and live more comfortably and at the same time enable them to raise their standard of living. I suggest that both these suggestions be examined and if found suitable be circulated to the States so that our housing colonies could become really good models.

3. I suggest that no Centrally Sponsored Housing Colony Schemes should be exclusively reserved for the Scheduled Castes. Unless we make an attempt at having composite colonies it will not help us to eradicate the evil of untouchability. I think there are non-Scheduled Caste families who would welcome being included in various Housing Schemes that we have in the country for Harijans.

This matter should be examined immediately.

सत्यमेव जयते

Sd/- VIOLET ALVA

3rd September, 1958.

DEPUTY HOME MINISTER

APPENDIX IV
No. 15/9/57-SCT. III
Government of India
Ministry of Home Affairs

From

SHRI O. K. MOORTHY, M.A., LL.B.,
Officer on Special Duty.

To

ALL STATE GOVERNMENTS

*New Delhi-2, the 2nd April, 1958.
12th Chaitra, 1880.*

SUBJECT—*Scavenging work—Amelioration of the conditions of scavengers—
Questionnaire for.*

Sir,

As all the State Governments/Union Territories are aware, the Central Advisory Board for Harijan Welfare has constituted a Sub-Committee for preparing a scheme for putting an end to the practice of carrying night-soil in baskets or buckets.

The Committee would like to collect complete factual information regarding this problem, in order to enable them to examine it fully. The Committee has accordingly prepared a Questionnaire a copy of which is enclosed herewith. It is requested that the State Governments/Union Territories may circulate this Questionnaire to the Corporations, Municipalities, Notified Area Committees, other Local bodies, as the case may be, and to such social workers or voluntary organisations who might be interested in the welfare of scavengers in the country for eliciting their replies and suggestions by a target date. Wherever it is considered necessary, the State Governments/Union Territories may get the Questionnaire translated into regional languages which would further facilitate eliciting the information by them. After the replies are received by the States/Union Territories, they may be forwarded to this Ministry as early as possible but in any case, not later than the 15th May, 1958. It would however, be appreciated if consolidated information is sent to the Committee by the States in English along with their views.

In view of the importance of the problem for the welfare of Harijans, the Committee is anxious to get the information at the earliest. The expeditious cooperation of the State Governments/Union Territories in the matter would therefore be greatly appreciated.

Yours faithfully,
Sd/- O. K. MOORTHY
OFFICER ON SPECIAL DUTY

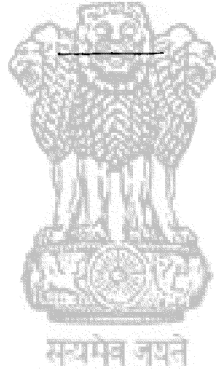
No. 15/9/57-SCT-III.

New Delhi-2, the 2nd April, 1958.
12th Chaitra, 1880.

Copy together with 10 spare copies of the Questionnaire to :—

- (1) Shri K. L. Balmiki, M.P.,
D-II/315, Diplomatic Enclave,
Vinay Marg, New Delhi.
- (2) Shri N. S. Kajrolkar,
President, Bharatiya Depressed Classes League,
13, Windsor Place, New Delhi.
- (3) Shri Rajkrishna Bose, M.L.A.,
President, Orissa Harijan Sevak Sangh,
Bengali Sahai, Cuttack.
- (4) Shri P. N. Rajabhoj, M.P.,
7, Ferozeshah Road, New Delhi.
- (5) Shri N. R. Malkani, M.P.,
115-B North Avenue, New Delhi.

Sd/- O. K. MOORTHY
OFFICER ON SPECIAL DUTY



Government of India

Ministry of Home Affairs

**SUB-COMMITTEE OF THE CENTRAL ADVISORY BOARD FOR
HARIJAN WELFARE**

QUESTIONNAIRE

Question

Reply

1. Name of the local authority : Corporation/Municipality/District Municipality/Borough Municipality/Notified Area Committee/Town Area Committee/Union Board/Cantonment Board/District Board/Panchayat/Revenue District and State in which located.
2. Population of the area under your jurisdiction along with the population of sweepers and scavengers.
3. Budget provision for the local authority during 1957-58.
4. Budget provision for the year 1957-58 for removal of night-soil.
5. What is the total amount of collection as latrine tax, latrine cess or conservancy tax for the year 1957-58 ?
6. Out of the total amount collected as latrine tax or latrine cess or conservancy tax, what amount is spent for meeting the cost and the establishment and welfare of the conservancy staff during the year 1957-58.
7. How many public latrines are maintained by you ?
8. How many private latrines are there in your area ?
9. How many private latrines are there the scavenging of which is carried out by the local authority ?
10. What is the total number of scavengers employed by you to keep public latrines clean ? How many of them are engaged for cleaning water borne

*Water borne Others Total No.
of seats.*

*Question**Reply*

latrines ? What is the total number of female scavengers employed for public latrines ?

11. What is the total number of scavengers employed by you to keep private latrines clean ? How many of them are engaged to clean water borne latrines ? What is the total number of female scavengers employed for cleaning private latrines ?
12. What is the total number of scavengers working as purely private employees, that is employees of Govt. offices, Firms, House Owners, etc.?
13. How is night-soil removed from public latrines. Give a detailed description of the existing practice.
14. How is night-soil removed from private latrines ? Give a detailed description of the existing practice.
15. In what type of receptacle is the night-soil so removed from the latrines are emptied—open—close—self closing type ?
16. Are private latrines so constructed that scavengers have to stand in the street while taking out the receptacle and emptying them ?
17. How many latrines are there where no type of receptacle is provided, but where the night-soil drops on the floor of the latrine itself ?
18. Are the public and private latrines so constructed that urine and wash-water mixed with night-soil which consequently drops and leaks out of the receptacle while carrying on head or shoulder by the scavengers ?
19. Are there any special implements in use for removal of night-soil or is night-soil removed by hand ?
20. Have attempts been ever made by Corporations and large municipalities to adopt scientific, hygienic and modern mechanised methods for the removal and disposal of night-soil, with a view to eliminate the practice of removal of night-soil with hand or

*Question**Reply*

the practice of carrying night-soil as head-loads or on shoulders? If so, please give the details or enclose a copy of report on the matter.

21. Have you devised any hand cart or a small bullock cart for carrying night-soil receptacles from latrine to the night-soil cart or lorries? Please give diagrams and photographs of such carts and receptacles.
22. In what receptacle does the scavengers empty the receptacles of night-soil from each latrine in bigger basket, buckets, pail or other containers?
23. Do night-soil carts carry night-soil from place to place and if so how many carts are used in the local authority?
24. How does the scavenger carry the night-soil from each collecting place to the night-soil cart? Are they carried as head-loads or are they carried by hands?
25. Is the night-soil cart kept at one central place for collection of night-soil or does it move away along with the scavenger as he goes on cleaning latrines from one house to another?
26. Are there any hand carts for emptying night-soil receptacles which move from residence to residence or are bullock carts kept waiting at a distance to which the night-soil has to be carried from the receptacles as head-loads or in baskets or buckets?
27. Do you employ lorries for removal of night-soil, if so, how many?
28. How is night-soil, refuse, etc., disposed of? Where are they dumped or trenched?
29. How far from the limits of the nearest habitation is the dumping or trenching ground for night-soil, refuse, etc., located?
30. How many scavengers are employed at the night-soil dumping or trenching grounds?

Question

31. What implements are supplied to the scavengers? Give a description of these and if possible with diagrams or photographs.
32. Are scavengers supplied with free uniforms, footwear, towels, soaps, etc.?
33. Is there any provision of soap, towel and toilet rooms for wash, bath and changing clothes for the scavengers who get dirty due to handling and carrying night-soil? Please give the number.
34. Has ever a health survey been made on the occupational disease or any special disease found among sweepers and scavengers, primarily due to their filthy occupation of handling or carrying night-soil? If so, please enclose the copy of report on the health survey.
35. (a) What is the extent to which the recommendations of the Bombay Scavengers' Living Conditions Enquiry Committee Report 1952 have been implemented in your area in order to abolish the practice of carrying night-soil on head or shoulders or in hands? Please give details.

(b) Have any Committee been appointed by your State Govt. for enquiring into the living conditions of the scavengers, if so copies thereof may be furnished?
36. Have the local bodies taken advantage of the financial assistance provided by the Govt. of India to bear 50 per cent of the expenditure that may be incurred by the Municipal Committees and other local bodies to provide wheel barrows or hand carts to sweepers? If so, please give details. If your local body has not availed of this offer, please state the reasons.
37. Have the local bodies any system of granting maternity leave to female employees among the conservancy

Question

staff? Please give details. If not, have there been any instances of injury, mis-carriage, etc., to such employees?

38. What is the average size and weight of the load of night-soil usually carried on head, on shoulders or on waist by the scavengers?
39. What is the average number of duty hours during which the scavengers are engaged in handling or carrying night-soil every day?
40. What is the number of latrines a scavenger is allotted for cleaning every day?
41. What type of conservancy service is provided in case of emergency gatherings such as melas etc.?
42. Do the public health authorities of your local bodies advise and guide the public in constructing suitable non-service type latrines in towns and cities where possible? If so, please give details.
43. Are trench, well or compost type latrines (Kucha or Pucca) encouraged in rural areas under District Boards, Local Boards or Gram Panchayats? If so please give details.
44. Are there any public or private latrines where pigs or cattle have access to the night-soil?
45. Have you framed rules or by-laws in regard to constructions of latrines, urinals etc., with a view to avoiding as far as possible the process of removal of night-soil by hand, elimination of carrying night-soil as head-loads etc.? If so, furnish copies of such by-laws.
46. Any other relevant information not covered under the above.

Wherever possible, Local Authorities may kindly furnish diagrams, photographs of the items referred to such as receptacles, wheel barrows, implements used etc.

A water borne latrine is one which has cleaning arrangements through a self flush, chain flush or by flushing with water separately.

MEMBERS OF THE SCAVENGING CONDITIONS ENQUIRY
COMMITTEE

1. Shri N. R. Malkani, M.P., (*Chairman*),
115-B, North Avenue,
New Delhi.
2. Shri K. L. Balmiki, M.P.,
D-II/315, Diplomatic Enclave, Vinaya Marg,
New Delhi.
3. Shri N. S. Kajrolkar,
13, Windsor Place,
New Delhi.
4. Shri P. N. Rajabhoj, M.P.,
7, Ferozeshah Road,
New Delhi.
5. Shri Rajkrishna Bose, M.L.A.,
Orissa Harijan Sevak Sangh, Bengali Sahai,
Cuttack.
6. Shri O. K. Moorthy, (*Secretary*),
O.S.D., Ministry of Home Affairs,
New Delhi.



APPENDIX V

STATEMENT SHOWING THE NUMBER OF REPLIES RECEIVED IN RESPONSE TO THE QUESTIONNAIRE ISSUED BY THE COMMITTEE

Sl. No.	State/Union Territory	From the State Govern- ment/Union Administration	From indi- viduals	Total
(1)	(2)	(3)	(4)	(5)
1.	Andhra Pradesh	146	1	147
2.	Assam	51	—	51
3.	Bihar	42	—	42
4.	Bombay (Bilingual)	443	16	459
5.	Kerala	29	—	29
6.	Madhya Pradesh	295	—	295
7.	Madras	216	2	218
8.	Mysore	140	—	140
9.	Orissa	36	—	36
10.	Punjab	133	1	134
11.	Rajasthan	86	—	86
12.	Uttar Pradesh	298	1	299
13.	West Bengal	64	—	64
14.	Pondicherry	3	—	3
15.	Andaman & Nicobar Islands	1	—	1
16.	Delhi	2	3	5
17.	Himachal Pradesh	12	—	12
18.	Laccadive, Minicoy & Amindive Islands	1	—	1
19.	Manipur	1	—	1
20.	Tripura	1	—	1
TOTAL		2,000	24	2,024

APPENDIX VI

PRINCE AQT1-2 TYPE (YEAR 1960)

SMALLER SIZE FOUR WHEELED SANITATION CAR

Various Factors of the Remodelled Car

Morita Pump Special Industry Co. Ltd.

Head Office : No. 32, 3-chome , Ohtomo-Machi,
Ikuno-ku; OSAKA.

Branch & No. 2, Nishi 3-chome, Takaida.

Factory : Fuse-city, Osaka Prefecture.

Dated : 9th January, 1960.

(2) Specification.

Below is the specification of the remodelled car.

ITEM				ITEM			
Kind	..	..	..	Smaller size 4 wheel-ers	Use	..	Special
Dead weight (kg)	..	..	..	2285	Name of car	..	Prince
Seating capacity	..	..	..	2+0+1	Model (Year)	..	AQT1-2, 1960
Seat + Standing Space	..	..	..	3	Shape	..	Dung cart
Maximum loading capacity (kg)	..	..	..	(1800 1) 1800	Engine model	..	GA 4
Total weight (kg)	..	..	..	4250	Total exhauston	..	1-484
Length m	..	..	..	4-610	Kind of fuel	..	Gasoline
Width m	..	..	..	1-695			
Height m	..	..	..	1-980			
Inner measurement of tank	Length	2-540		Distance between axes	2-345		
	Width	() 1-391		Overhang (Upto end of rear edge of tank)	m	0-860	
	Height	(0-681 0-690)		Offset (tank)	m	0-440	
Distribution of weight pressure on wheel when empty (kg)	Front wheel	1165		Front wheel	7-00-16-8		
	Rear wheel	1120		Tyre	Rear wheel	7-00-16-12	PRLT
Distribution of weight pressure on wheel when loaded (kg)	Front wheel	1670		Percent- age of wgt. pres- sure on tyre when loaded (%)	Front wheel	98-2	
	Rear wheel	2580			Rear wheel	128-4	
Percentage of weight pressure on front wheel when loaded		39-3		Maximum stability inclination angle	Right	42°-22'	
					Left	42°-22'	
Distance between wheels m..	Front	1-364					
	Rear	1-350					

(3) Decision on weight and gravity position of the car.

(A) Effect of equipped portion to weight and moment and effect by crew and load quantity.

(In this case, the co-ordinate origin shall be rear wheel conjunction point).

Note : Wheel base 234.5 cm Offset 44 cm							
	Distance from rear wheel	Height above ground	Empty weight	Front wheel repulsive force	Rear wheel repulsive force	Empty weight \times height above ground	Empty weight \times Distance of rear wheel
	(X)	(Z)	(M)	(W)	(Wr)	(MZ)	(MX)
Chasis	185	59	1375	953	422	81125	
Power-Take-Off	185	40	13	10 3	2 7	520	
Pump	105	40	39	17 5	21 5	1560	
Pump bracket	105	45	12	5 4	6 6	540	
Sucking & Draining Switch-cock	183	58	14	10 9	3 1	812	
Separator	160	52	18	12 3	5 7	1144	
Deodorization pipe	113	50	13	6 3	6 7	650	
Joint Pipe	155	70	28	18 5	9 5	1960	
Inspiration pipe	175	115	3	2 2	0 8	345	
Jet separator	162	54	2	1 4	0 6	108	
Fender	0	75	12	0	12	900	
Strainer receptacle	60	60	3	0 8	2 2	180	
Stiring stick	200	110	3	2 6	0 4	330	
Antiseptic solution receptacle	(—) 75	62	2	(—)0 6	2 6	124	
Spare tyre receptacle	192	100	17	13 9	3 1	1700	
Tool box	190	95	5	4 1	0 9	475	
Tank	44	111	490	91 9	398 1	54390	
U bolt	44	65	12	2 3	9 7	650	
Manhole	137	155	25	14 6	10 4	3875	
Spare manhole	(—) 47	148	17	(—)3 4	20 4	2516	
Apron	51	85	37	8	29	2720	
Sewage cover	(—) 80	78	8	(—)2 7	10 7	624	
Cleaning hole rid	(—) 86	75	3	(—)1 1	4 1	225	
Suction pipe receptacle	(—) 10	98	24	(—)1	25	2352	
Suction pipe	32	105	35	4 8	30 2	4515	
Spare suction pipe receptacle	47	166	6	1 2	4 8	996	
Sucking & draining cock	(—) 94	68	24	(—)9 6	33 6	1632	
Sewage container	(—) 75	65	5	(—)1 6	6 6	325	
Tank-Railing	37	115	5	0 8	4 2	575	
Rear step	(—) 100	60	10	(—)4 3	14 3	600	
Side step	55	65	10	2 3	7 7	650	
Others	30	63	15	1 9	13 1	945	
Sub-total	119.3	74.4	2285	1162 7	1122 3	170063	272653
Number of crew			165	169 9	(—) 4 9		
Capacity	44		1800	337 7	1462 3		
Total			4250	1670 3	2579		

(4) Examination of Safety Standard Factors.

(A) Ratio between total weight of car and the weight put on front wheels,
 $W_f/w \times 100 = 39.3\% \quad 20\%$

(B) Load factor

Kinds of wheels ..	Tyre		Burden	
		Load capacity	Burden tyre	Load factor per tyre
Front wheel	7.00-16-8 PRLT	850	835	98.2 110
Rear wheel	7.00-16-12 PRLT	1005	1290	128.4 130

(C) Maximum inclination angle

$$L=234.5 \quad X'=119.3 \quad T_f=136.4 \quad T_r=135 \quad Z=74.4$$

$$B = \frac{1}{2} \left[\frac{(T_f - T_r)X'}{L} + T_r \right] = \frac{1}{2} \left[\frac{(136.4 - 135)119.3}{234.5} + 135 \right] = 67.85$$

$$B' = B \times \cos \left[\frac{-1(T_f - T_r)}{\tan L} \right] = 67.85 \times \cos \left[\frac{-1(136.4 - 135)}{\tan 234.5} \right]$$

$$= 87.85 \times \cos (\tan 0.00597) = 67.85$$

$$\text{Inclination angle } \tan = \frac{B'}{Z} = \frac{67.85}{74.4} = 0.912$$

$$\therefore = 0.912 = 42^\circ.22' > 35^\circ$$

(D) Running capacity

Maximum torque of engine $Q = 11.5 \text{ kg-m}$

Final deceleration ratio $r_e = 6.833$

Total weight of car $W = 4250 \text{ kg}$

Effective radius of driving wheel $R' = 0.372 \text{ M}$

Maximum deceleration ratio $r = 5.19 \times 6.833 = 35.46$

$$\text{Acceleration capacity} = \frac{Q \cdot r_e}{W \cdot R'} = \frac{11.5 \times 6.833}{4250 \times 0.372} = 0.05 > 0.038$$

$$\text{Slope climbing capacity} = \frac{0.9Q \cdot r}{W \cdot R'} = \frac{0.9 \times 11.5 \times 35.46}{4250 \times 0.372} = 0.015$$

$$= 0.216 > 0.125$$

(E) Total weight of car per H.P.

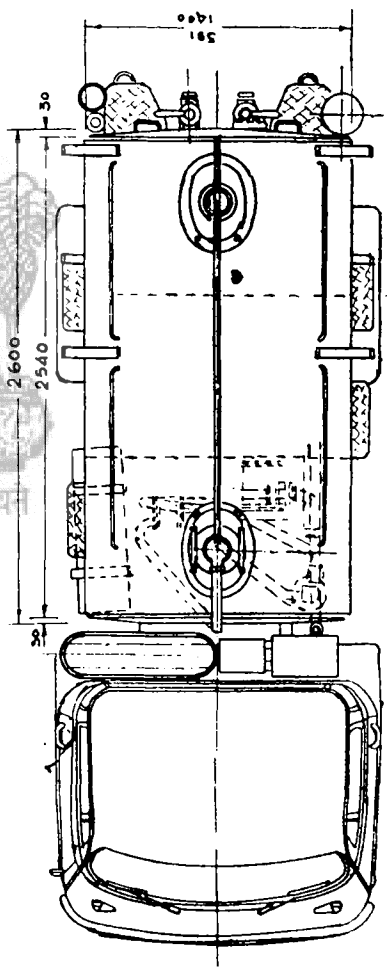
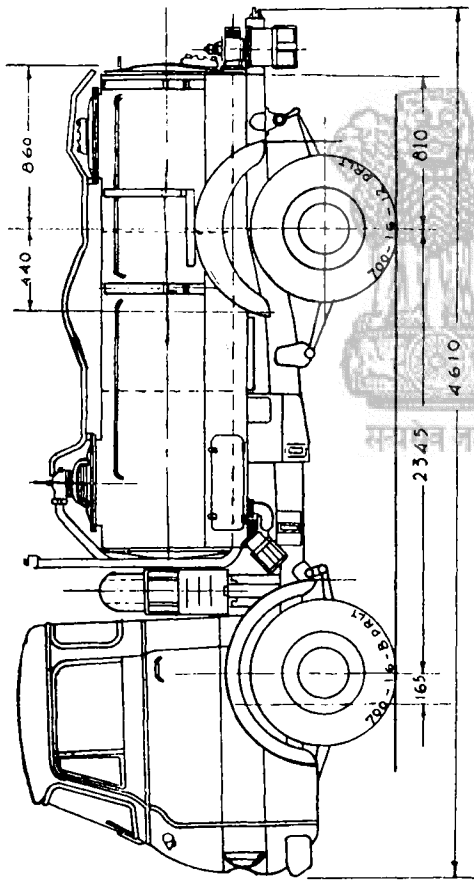
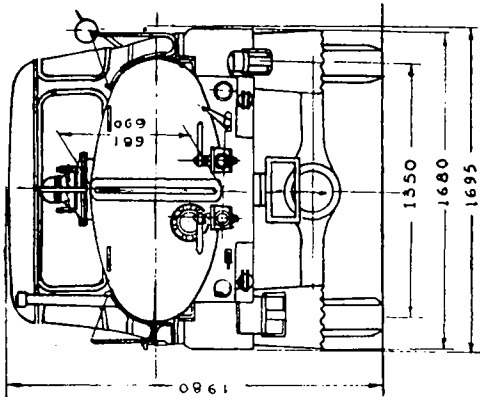
Maximum H.P. $N_{\max} = 70 \text{ PS}$

Total weight of car per maximum H.P. $W/N_{\max} = 4250 \text{ kg} / 70 \text{ PS} = 60.7 \text{ kg/PS} < 11 \text{ kg/PS}$

(A)–(E) mentioned above satisfy the provisions of the Safety Standard.

(5) Factors of Pump and Tank

Name				Morita system MS Model vacuum pump	Patent No. 200484
PUMP	Model	..	..	MV-B3	
	Material	..	..	Special cast iron	
	Revolution	..	..	700-1000 RPM	Revolution Measurement gauge scope 2000 RPM
	Sucking capacity				
	—maximum height—	..		8 m (working time),	
	Maximum pressure	..		2.5 Kg/Cm ²	
	Maximum vacuum degree			758mm/Hg	
	Capacity	..	..	1943 ^{cc}	
TANK	Measurement	..		Length × Width × Height = 2600 ^{m/m} × 1400 ^{m/m} × 690 ^{m/m}	
	Capacity	..	..	1890'	
	Shape and Model	..	..	Oblong, electric welding model	
	Number of wave-prevention plates	..	..	2 sheets (630' partition)	
	Thickness of steel plates			Panel 6.0 ^{m/m} Side plate 4.5 ^{m/m} Wave Prevention plate 3.2 ^{m/m}	
	Internal enforcement material			40 ^{m/m} × 40 ^{m/m} × 5 ^{m/m} Yamagata steel	
	Cock	..	..	Rear sucking & draining hole	65 ^{m/m} (2)
	Test Pressure	..	..	Internal 3 Kg /Cm ² External	Leave it on ten minutes at vacuum degree 686mm/Hg
	Manhole	..	..	Main	With Float valve and Alarm- device 1
	Cleaning hole	..	..	Spare 150 ^{m/m} 1	With Double cap and cleaning hole 1



TOYOTA DA 90 Type (Year 1960)

ORDINARY SIZE FOUR WHEELED SANITATION CAR

Various Factors of the Remodelled Car

Morita Pump Special Industry Co. Ltd.

Head Office : No. 32, 3-chome, Ohtomo-machi,
Ikuno-ku, **OSAKA**

Branch & No. 2, Nishi 3-chome, Takaida,
Factory : Fuse-city, Osaka Prefecture.

Dated : 17th May, 1960.

(2) Specification.

Below is the specification of the remodelled car.

ITEM			ITEM		
Kind	Ordinary size 4 wheelers	Use	Special		
Dead weight (kg)	5625	Name of car	Toyota		
Seating capacity		Model (year)	DA90, 1960		
Seat + Standing space + driver	2+0+1=3	Shape	Dung cart		
Maximum loading capacity (kg)	5400	Engine model	2 D		
Total weight (kg)	11190	Total exhauston	6.494		
Length m	6.820	Kind of fuel	Light oil		
Width m	2.380				
Height m	2.350				
Inner measurement of tank	Length	3.620 ()	Distance between axes	4.200	
	Width	1.988 (1.950)	Overhang (Upto end of rear edge of tank)m	1.360	
	Height	1.028 (1.040)	Offset (tank) m	0.485	
Proportion of wgt. pressure on wheel when empty (kg)	Front wheel	2300	Tyre	Front wheel	8.25-20-14P
	Rear wheel	3325		Rear wheel	8.25-20-14P
Proportion of wgt. pressure on wheel when loaded (kg)	Front wheel	3045	Percent- age of wgt. pressure on tyre when loaded	Front wheel	87
	Rear wheel	8145		Rear wheel	116.4
Percentage of weight pressure on front wheel when loaded		27.2	Maximum stability inclination angle	Right	
				Left	
Distance between wheels m	Front wheel	1.541			
	Rear wheel	1.770			

(3) Factors of Pump and Tank

Name		Morita system MS Model vacuum pump	Patent No. 200484
PUMP	Model	MV-A2	
	Material	Special cast iron	
	Revolution	700-1000PM	
	Revolution gauge	Measurement scope 2000 RPM	
	Sucking capacity maximum height.	8 m (working time)	
	Maximum pressure	2.5 Kg/Cm ²	
	Maximum vacuum degree	758 mm/Hg	
	Capacity	3992.1 ^{cc}	
Measurement		Length \times Width \times Height = 3700 ^{m/m} \times 1950 ^{m/m} \times 1040 ^{m/m}	
Capacity		5690l	
TANK	Shape and model		Oblong, electric welding model
	Number of wave-prevention plates		4 sheets (11381 partition)
	Thickness of steel plates	Panel	8.0 ^{m/m}
		Side Plate	6.0 ^{m/m}
		Wave prevention plate	3.2 ^{m/m}
	Internal enforcement material		50 ^{m/m} \times 50 ^{m/m} \times 6 ^{m/m} Yamagata steel
Cock		Front sucking cock 65 ^{m/m} one 75 ^{m/m} one Sucking & draining cock 65 ^{m/m} one 100 ^{m/m} one	
Test	Internal	3 Kg/Cm ²	
Pressure	External	Leave it on for 10 minutes at vacuum degree 686 mm/Hg	
Manhole	Main	With Float valve and Alarm-device one	
	Spare	With Double cap and cleaning hole	
Cleaning hole		150 ^{m/m} one.	

APPENDIX VII

MADURAI MUNICIPAL SEWAGE FARM

The problem of disposal of the sewage of the city was considered along with the drainage scheme as early as 1910 and concrete proposals for disposal on land were drawn up by the Sanitary Engineer, Government of Madras in the year 1910. However many years lapsed before the scheme was actually put into execution.

Most of the lands for the farm were acquired or got alienated in the year 1917 and the work on the farm started thereafter. The farm was partly completed only in the year 1926 and cultivation of crops was started early that year through lessees under the supervision of the Madurai Drainage Division. The farm with an area of 152 acres situated 4 miles south of the city in Arupukottai road was handed over to the municipality by the end of July 1927.

The extent of the farm remained more or less the same for over two decades. A further extent of about 83 acres in the same area were subsequently added for sewage disposal and cultivation in the year 1952. The present extent is 242 acres inclusive of the fish ponds.

The farm has been well laid out in a sloping terrain (1 in 100). The soil and sub soil at the site of the farm comprise mostly of red loamy soil with patches of clayey soil also. For filtering the sewage, earthenware sub soil pipes have been laid (loose jointed) at a depth of about 3 feet and at 33 feet intervals. They are covered over with granite metal and pebbles. These pipes lead into deeper effluent channels constructed at right angles to them. The under drains have been functioning for the past 30 years or so without much of a blockage.

About 2½ to 3 millions gallons of raw sewage are being received daily through the five mile long 24" cast iron pumping main. The entire quantity is irrigated in about 25 to 30 acres at a time. The sediments get deposited on the surface of the soil and are collected once a year, amounting to about 5000 tons. It is a good organic manure for paddy and other crops and is very much in demand.

The sewage irrigated on the plots passes through the soil and is drained out through the sub soil pipes. The effluent water, about 1½ million gallons daily is very clear and flows outside the farm limits. Recently, however, attempts have been made to partly utilise this out-flowing effluent by pumping it back to the farm, mixing with the raw Sewage. Fish ponds have been laid and pisciculture has been introduced jointly with the Government Fisheries Department, after a preliminary study of the adaptability and growth of a number of varieties of fish.

Also the effluent is utilised for diluting the sewage (1 : 6) before irrigation, with a view to secure higher yield of crops. Still a large quantity is flowing to waste. The sanctioned scheme for utilising the excess quantity of effluent for the cultivation of vegetables and food crops is under the consideration of the Municipal Council.

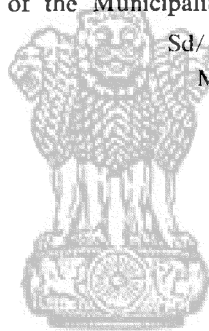
The main crop from the farm is fodder grass (Guinea Grass), which is easy to grow, easily marketable, stands in the field for decades together (first planting of 1927 is still growing well) and brings a very good yield. The maximum recorded yield was as much as 117 tons per acre per annum. The other crops grown are Agathi (*sesbania grandiflora*) green vegetables and cereals. There are a few fruit trees and cocoanut trees.

The economics of the farm has been encouraging all through. Over a lakh and a quarter of rupees has been the net annual income for years together. The figures for 1955-56 and 1956-57 are given below. The receipts have far exceeded the capital investment of about Rs. 5 lakhs (both for the farm and the extension).

Year	Receipts	Expenditure	Profit
	Rs.	Rs.	Rs.
1955-56	1,98,636	78,739	1,19,897
1956-57	2,21,399	82,510	1,38,889

It is gratifying to note that this farm has been considered as one of the best and well maintained Sewage Farm in the country and it also serves as a model for the proper and beneficent utilisation of sewage. Such a farm is not free from defects. Hookworm disease is a great menace to the workers. As a protective measure gum boots have been provided for the workers numbering about 175. Medical facilities are also provided by weekly visits of one of the medical officers of the Municipality.

Sd/- COMMISSIONER,
MADURAI MUNICIPALITY



सत्यमेव जयते

APPENDIX VIII

SUBJECT —*Grant of Subsidy and loans to poor persons for converting their dry type latrine into water borne within the City walls of Jaipur City.*

The density of population within the City walls of Jaipur City is over a lac souls to a sq. mile. Outside the City walls it is very much lower. About 90% of the residential houses within the city have got latrines but more than 95% of these latrine are dry and open.

2. The sanitary conditions within the City walls have therefore now become very unsatisfactory. The main problem confronting the Municipal Council is the removal of the night-soil from private latrines in a proper manner. The old inhuman method of removing night-soil as headload mostly persists. So long as this inhuman system is not replaced by water borne latrines on a large scale, the insanitary conditions are bound to continue.

3. The best and the only lasting solution of this problem is to arrange the disposal of night-soil of private latrines through underground sewerage system in the entire area within the City walls.

4. The matter was closely and carefully investigated by the Municipality and it was found that though more than 9,000 ft. of sewer line had already been laid in the various wards of the City, the number of water borne latrines in this area is less than 2,000.

5. Legal action was vigorously, started against those who were not converting their dry type latrines into water borne. About 200 to 300 cases were prosecuted to the Court every month. But when these cases were critically examined it came to light that the persons challaned included a large number of such poor people who were much too poor to afford water borne latrines without Govt. help.

6. The Municipal Council, Jaipur has, therefore, launched a Scheme for granting loans and subsidy to the poor people for converting their private dry type latrine into water borne.

The terms and conditions for the grant of this subsidy and loan are as under :—

Subsidy

- (a) Persons with an income of less than Rs. 100 per month are entitled to get a subsidy (in kind of sanitary fittings) costing up to Rs. 60 for each latrine.
- (b) In cases of destitutes and widows whose income is less than Rs. 50 per month; sanitary fitting worth up to Rs. 100 can be given for each latrine.
- (c) In cases where any of the co-sharers of a joint property is a destitute or a widow, the entire cost of the sanitary fittings to the extent of such pauper's share shall be paid in full by the Municipality.

Loans

- (a) Persons with a maximum monthly income of Rs. 150 or less, who cannot immediately pay the full cost of the flush latrine are eligible to get a maximum loan of Rs. 99 for each latrine;

- (b) Persons with a maximum income of Rs. 200 per month are eligible to get a maximum loan of Rs. 50 per latrine;
- (c) The loan will be payable in one instalment immediately after the plans for the sanitary fittings in question has been approved by the Municipality; and
- (d) Those who can return the loan within a period of three months shall not be charged any interest. In other cases, loan with interest @ Rs. 4 is recoverable in ten equal monthly instalments.

7. The result of the inquiries made in this connection is that the public as a whole and even poor labourers do fully realise that a water borne latrine is a dire necessity now. The response to this scheme from the general public is very satisfactory.

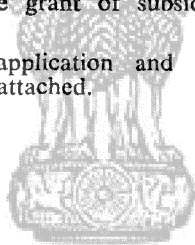
8. This work has been started in all the wards with the active cooperation and help of the residents of the area and promises have been made by the people to construct at least one thousand latrines in some of Chowkries in this scheme.

9. Side by side with this scheme the Municipality has also taken up the work of extending the "Sewer line" in the area where there is no sewer line at present within the City. This work is expected to be completed in two years at an estimated cost of about 20 lakhs. The Municipality has approached Rajasthan Government for the grant of subsidy to the extent of 50% for these schemes.

10. Printed copies of the application and other forms adopted for the grant of subsidy and loan are attached.

July 20, 1959.

(Sd.) P. N. KAUL
ADMINISTRATOR
MUNICIPAL COUNCIL,
JAIPUR.



प्रतिज्ञा पत्र

आज तारीख को पुत्र
निवासी (जो आगे ऋण लेने वाला कहा जाएगा) तथा नगर-
पालिका जयपुर (जो आगे नगरपालिका कही जाएगी) दोनों के बीच इस प्रतिज्ञा पत्र पर
हस्ताक्षर किये जाते हैं ।

चूंकि नगरपालिका जयपुर ने ऋण लेने वाले के आवेदन पत्र दिनांक
पर र० का ऋण ऋणप्राप्तकर्ता के यहां फ्लश तहारत बनाने
के लिए स्वीकार किया है, जिसका विवरण इस प्रतिज्ञा पत्र के साथ संलग्न है ।

उक्त ऋण संलग्न नियमों तथा शर्तों पर स्वीकार किया गया है, विशेष शर्तों
निम्नलिखित हैं जिनको ऋण लेने वाला स्वीकार करता है :—

- (१) ऋण देने का तरीका :—नगरपालिका प्रतिज्ञा पत्र की अन्य शर्तों के अन्तर्गत
ऋणकर्ता को रुपये का ऋण देती है ।

- (२) ऋण लौटान की शर्तें :—दोनों पक्षों के बीच हुए प्रतिज्ञा पत्र तथा ऋण लेने वाले को नगरपालिका द्वारा दिये जाने वाले ऋण की राशि को ध्यान में रखते हुए ऋण लेने वाला नगरपालिका के साथ यह प्रतिज्ञा करता है कि :—
- (१) ऋण लेने वाला नगरपालिका को ऋण की राशि मय व्याज ४ प्रतिशत प्रति वर्ष के हिसाब से १० मासिक किश्तों में लौटा देगा और उसकी पहली किश्त ऋण लेने की तारीख से एक माह के बाद देय हो जाएगी।
 - (२) यदि ऋण लेने वाला इस प्रतिज्ञा पत्र में निर्दिष्ट किसी शर्त के पालन में असफल रहता है तो उस समय इस ऋण का जितना भी रुपया नगरपालिका का बकाया रहेगा उसे तुरन्त वसूल कर सकेगी।
 - (३) ऋण लेने वाला इस ऋण का उपयोग जो उसे नगरपालिका द्वारा दिया जाएगा अपने जयपुर स्थित रहने के मकान नं० सकिल नं० चौकड़ी रास्ता में फलश का तहारत बनाने में ही करेगा।
 - (४) ऋण लेने वाला ऋण प्राप्ति की तारीख से १५ दिन के भीतर फलश का तहारत बनाने का काम शुरू करेगा और एक सप्ताह में उसका काम पूरा कर देगा।
 - (५) जब तक ऋण प्राप्त कर्ता नगरपालिका का ऋण नहीं चुका देगा, तब तक ऋण का सम्बन्धित जायदाद पर रहेगा और वह उसे मुन्तकिल नहीं कर सकेगा।

संलग्न परिपत्र

(मकान में फलश तहारत के स्थान का विवरण)

नं० सकिल नं० चौकड़ी रास्ता नगरपालिका के में रखा जाता है। यह मकान लम्बाई चौड़ाई में स्थित है। इसके उत्तर में श्री का पूर्व में श्री का दक्षिण में श्री का और पश्चिम में श्री का मकान है।

एक रुपये का स्टाम्प इसके साथ संलग्न है।

हस्ताक्षर कमिश्नर नगरपालिका

हस्ताक्षर ऋण प्राप्त कर्ता

मोहर नगरपालिका

गवाह १.

गवाह २.

ऋण प्राप्त करने सम्बन्धी नियम

- (१) ऋण प्राप्त करने वाले को एक निर्धारित फार्म पर आवेदन पत्र देना होगा ;
(आवेदन पत्र का नमूना पृष्ठ १७३ पर दिया गया है) ।
- (२) जिन व्यक्तियों की मासिक आय १५० रु० से कम है उन्हें उनकी आर्थिक स्थिति तथा तहारत निर्माण व्यय को दृष्टिगत रखते हुए फलश तहारत बनाने के लिए फी तहारत ६६ रु० का अधिकतम ऋण दिया जा सकेगा ।
- (३) जिन व्यक्तियों की मासिक आय २०० रु० या अधिक है लेकिन किन्हीं विशेष परिस्थितिवश ऋण लिए बिना जिनके लिए तहारत बना सकना मुश्किल है उन्हें फी तहारत ५० रु० का अधिकतम ऋण दिया जा सकेगा ।
- (४) यदि मकान मालिक विधवा या अपाहिज व्यक्ति है तथा उसके निर्वाह का एकमात्र साधन मकान किराया है तथा मकान किराये से ५० रु० मासिक से कम आय होती है तो उसे ऋण देने में प्राथमिकता दी जायेगी ।
- (५) ऋण दस मासिक किश्तों में व्याज का पैसा जोड़कर वसूल किया जायगा । जिसकी दर ४) रु० सैंकड़ा सालाना होगी ।
- (६) ऋण प्राप्त करने के लिए यह जरूरी होगा कि ऋण की रकम मंजूर होने पर आवेदक नगरपालिका जयपुर के पक्ष में एक निर्धारित इकरारनामा लिखे ।
- (७) यदि कोई गलत विवरण देकर ऋण प्राप्त करेगा अथवा इस रुपये को तहारत के अतिरिक्त किसी और काम में उपयोग करेगा तो नगरपालिका को अधिकार होगा कि पूरा रुपया एक साथ वसूल कर ले ।
- (८) यदि कोई व्यक्ति ऋण लेने के दिन से तीन महीने की अवधि में ही ऋण की सारी रकम चुकती अदा कर देगा तो नगरपालिका उससे व्याज की रकम नहीं वसूल करेगी ।
- (९) नगरपालिका द्वारा तहारत का नकशा मंजूर करने पर ही ऋण दिया जा सकेगा ।

सत्यमेव जयते

ऋण प्राप्त करने के लिए आवेदन पत्र

- (१) ऋण चाहने वाले मालिक मकान का नाम
- (२) ऋण चाहने वाले के निवास स्थान का पता (मकान नं०, गली, मोहल्ला या रास्ता व चौकड़ी सहित)
- (३) जिस मकान में तहारत बनाने के लिए ऋण चाहा गया है उसका पता (मकान नं०, गली, मोहल्ला, रास्ता व चौकड़ी नाम सहित)
- (४) तहारत की अनुमानित लागत
- (५) चाहे गए ऋण की मात्रा
- (६) ऋण चाहने वाले का पेशा मय मासिक आय (इसमें वेतन, मंहगाई भत्ता और मकान किराए तथा अन्य मदों से होने वाले आय शामिल हैं)
- (७) ऋण चाहने वाले के आश्रितों की तादाद व विवरण
- (८) ऋण चाहने वाले के परिवार में अन्य कमाने वालों की मासिक आय का विवरण

मैं प्रमाणित करता/करती हूँ कि मेरे द्वारा दिए गए उपरोक्त विवरण सही हैं और मैंने सम्बन्धित नियम पढ़ लिए हैं और मैं उनका पाबन्द रहूंगा।

दिनांक

हस्ताक्षर प्रार्थी

मैं प्रमाणित करता हूँ कि श्री मेरे विभाग/फर्म/कारखाने में काम करते हैं और इनकी मासिक आय मंहगाई भत्ते सहित रु० की है।

दिनांक ह० विभागीय अध्यक्ष/मालिक फर्म/कारखाना।

मैं प्रमाणित करता हूँ कि श्री हमारे मुहल्ले में रहते हैं। हम इन्हें अच्छी तरह जानते हैं और इनके द्वारा दिया गया उपरोक्त विवरण सही है तथा उन्हें रु० ऋण के रूप में स्वीकार किया जाना हमारी राय में मुनासिब होगा।

(दो प्रतिष्ठित व्यक्तियों के)

दिनांक

हस्ताक्षर १.

२.

श्री को अपने मकान में फ्लश का तहारत बनाने के लिए रु० का ऋण स्वीकार किया जाता है। वे उपरोक्त धनराशि किस्तों में रु० प्रति माह के हिसाब से चुका दूँ।

ह० कमिशनर

ह० एडमिनिस्ट्रेटर

सहायता प्राप्त करने के लिए आवेदन पत्र

- (१) सहायता चाहने वाले व्यक्ति का नाम
(पिता व पति के नाम सहित)
- (२) सहायता चाहने वाले व्यक्ति के निवास स्थान का
पता जहाँ तहारत बनाने के लिए सहायता चाही
गई है। मकान नं०, गली, मुहल्ला, रास्ता व
चौकड़ी के नाम सहित
- (३) तहारत की अनुमानित लागत
- (४) कितनी सहायता चाही गई है
- (५) सहायता चाहने वाले के आश्रितों की तादाद व
विवरण।
- (६) सहायता चाहने वाले की मासिक आय
- (७) सहायता चाहने वाले के परिवार में अन्य कमाने
वाले सदस्यों की मासिक आय का विवरण।

मैं प्रमाणित करता/करती हूँ कि मेरे द्वारा दिए गए उपरोक्त विवरण सही हैं।

हस्ताक्षर या अंगूठा निशानी प्रार्थी

मैं प्रमाणित करता हूँ कि श्री.....को मैं अच्छी तरह जानता हूँ। ये मेरे मुहल्ले में रहते हैं और इनकी मासिक आय..... रु० से अधिक नहीं है तथा इनके द्वारा दिए गए उपरोक्त सभी विवरण सही हैं।

(प्रतिष्ठित दो व्यक्तियों के)

हस्ताक्षर: (१).....

(२).....

मैं प्रमाणित करता हूँ कि श्री.....मेरे कार्यालय में काम करते हैं और इनकी मासिक आय.....रु० है।

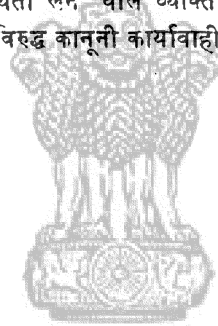
हस्ताक्षर विभागाध्यक्ष, फर्म, कारखाना
मालिक का नाम

श्री.....को अपने मकान में प्लश का तहारत बनाने के लिए.....
.....रु० की सहायता स्वीकार की जाती है।

अध्यक्ष, नगर विकास मण्डल, जयपुर

पलश तहारत बनाने के लिए सहायता देने सम्बन्धी नियम

- (१) सहायता चाहने वाले को निर्धारित फार्म में आवेदन पत्र देना होगा। आवेदन पत्र का नमूना पृष्ठ १७४ पर दिया गया है।
- (२) जिन व्यक्तियों की मासिक आय १०० रु० से कम है उनको सहायता के रूप में तहारत का सामान कीमती ६० रु० फी तहारत तक दिया जा सकेगा।
- (३) यदि मकान मालिक विधवा या अपाहिज व्यक्ति है तथा उसकी आजीविका का एकमात्र साधन मकान किराया है और मकान किराए से होने वाली मासिक आय ५० रु० से कम है तो उसे सहायता के रूप में तहारत का सामान कीमती १०० रु० फी तहारत तक दिया जा सकता है।
- (४) यदि एक मकान में दो से अधिक भागीदार हैं और उनमें एक भागीदार ऐसी विधवा या अपाहिज है जिसके पास निर्वाह का बहुत मामूली साधन है तो तहारत निर्माण का सामान या पैसा उसके हिस्से का पूरा सहायता के रूप में दिया जा सकता है।
- (५) सरकार को अधिकार होगा कि यदि गलत विवरण देकर उससे सहायता प्राप्त कर ली जावे तो वह सहायता लेने वाले व्यक्ति से सामान की पूरी कीमत वसूल कर ले और उसके विरुद्ध कानूनी कार्रवाई भी की जावेगी।



सत्यमेव जयते

APPENDIX IX

SANITARY METHODS OF EXCRETA DISPOSAL IN VILLAGES

Health Hazards of Insanitary Disposal of Excreta

Certain diseases such as typhoid fever, cholera, hookworm and the dysenteries are transmitted by the excreta of persons suffering from the diseases and by carriers. With the exception of the worm diseases, the infectious agent is the living germ of the disease. The carrier is apparently a healthy person whose excreta contains the living germs of the disease. He may be a person who previously has had the disease or one who was never known to have suffered from it. Other persons can be infected only by taking the live germ of the disease into the body through the mouth usually with contaminated water, milk, or other food. Thus, repulsive as the thought may be, anyone who contracts typhoid fever or dysentery actually has taken into his mouth at least a small quantity of the body excretions of another person.

The hookworm egg present in the excreta of an infected person is deposited on the ground and hatches in the soil into the larva of the hookworm. The disease is transmitted to other persons as the larva gains entrance to the body of a new person. Occasionally the larva is taken into the body with contaminated food, water, or milk. Ordinarily, however, the larva gains entrance by boring through the skin of persons going barefooted over infected soil.

Since typhoid fever, cholera, and the dysenteries are transmitted by infected excreta, all of these diseases could be practically eradicated if all human excreta were so disposed of that it could not be taken into the mouth by other persons. Proper sanitary disposal of human excreta also would bring under control hookworm disease and other worm infestations.

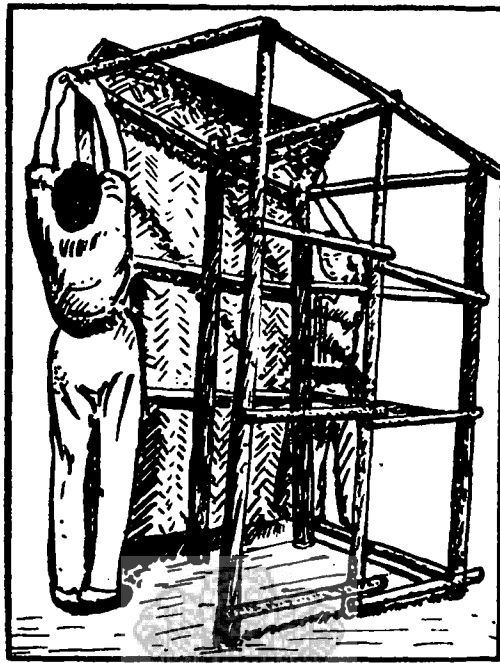
The principles of sanitary excreta disposal in rural areas are simple : (1) The wastes must be disposed of in such a way and in such location that they will not pollute water supplies, either by human waste flowing over the ground surface into reservoirs or streams which are drinking water sources, or by seeping through rock fissures or cracks in the ground to reach a well or spring. (2) Prevent the transmission of filth-borne diseases by flies from human waste. Briefly, this means disposing of the excreta underground or in such a manner that it is not accessible to flies, other insects and small animals. (3) Dispose of the excreta so that it will not pollute the ground with worm eggs in order to prevent transmission of hookworm. This is accomplished by the use of sanitary latrines which do not require servicing.

The sketches and other information included in this bulletin are intended as guides for the construction of sanitary latrines in villages.

Fundamentals of Improved Sanitary Latrine Construction

Some of the most important factors which apply to latrine designs and construction are as follows :

1. **Location :** The latrine should be located at least 50 feet from a well water supply and should be at a lower elevation so that the direction of flow of the ground water will be away from the well. Where there are crevaced rock formations, such as limestone, the safe distance from water supply may be much greater and utmost care should be exercised in locating the latrine to avoid contaminating the ground water supply. Latrines should not be located in areas usually subject to flooding. The latrine plate should be surrounded by a compacted earth mound the top of which should be above the usual flood water level.



2. **Squatting Plate :** It is important that the squatting Plate and footrest be of the dimensions shown on the sketches in order to minimise soiling. The plate should be constructed from impervious materials and have a smooth surface. When concrete is used, it should be given a hard and smooth finish. The plate should be set level, so that the water seal can function properly.

3. **Superstructure :** Locally available materials should be used for the superstructure. Its purpose is to provide shelter and privacy. A neat and attractive structure usually is better maintained.

4. **Maintenance :** The length of time the bore hole or pit will be serviceable depends on several factors including soil conditions, number of users, care in usage, etc. The latrine should be used only for the intended purposes and not for the disposal of refuse or other debris which will rapidly fill the pit or bore hole. The squatting plate should be washed down daily or the latrine otherwise kept clean. When the bore hole or water seal pit becomes filled to within six feet and two feet respectively of the ground surface, its use should be discontinued and earth should be compacted in the remainder of the space. A new bore hole or pit should be dug and the squatting plate moved to the new location.

5. **Uses :** Health education should go hand in hand with latrine construction so that each member of the household is informed as to the importance of the latrine from the standpoint of the health of the family as well as the village. They should be encouraged to use the latrine at all times and to see that it is properly maintained. In the final analysis the real test of the value of a sanitary latrine is the extent to which it is used and properly maintained. These factors are frequently disregarded in considering the relative merits of the various types of latrines.

Water Seal Pit Latrine

The attached drawing No. A-9 illustrates an improved type of latrine for use in rural areas. The squatting plate includes a water seal trap, a special innovation which improves the sanitary features of this latrine. By quickly pouring a half gallon of water into the trap, the contents are flushed directly into the pit below. The water seal squatting plate and the large pit have the following distinct advantages :

1. Prevention of odours from the pit entering the latrine building.
2. Mosquitoes and flies cannot enter the pit.
3. The pit requires no special tool for digging, and because of its size the period of usefulness will be extended.
4. Latrine may be installed in compound near house without creating a nuisance.
5. The pit with proper usage should last a family of 5 for a period of 3 to 5 years.

Certain disadvantages are also apparent in this type of latrine and should be considered prior to installation.

1. One half to one gallon of water is required for flushing of the water seal traps.
2. Experience has shown that unless water is readily available, proper maintenance will not be applied. A water container with cover and attached cup should be provided inside the latrine.

With proper maintenance the advantages listed far outweigh the disadvantages in this latrine. For the individual family there should be much pride of ownership because this is the most practical device for a flush type of latrine in the rural areas.

1. Select a well drained location 50 to 100 feet from the water supply and downhill from it, if possible.
2. Construct a frame or template the outside of which is the same size as the outside of the pit 3 ft. 6 in. \times 2 ft. 6 in. Four wooden boards 1 in. \times 6 in. may be used for this.
3. Lay frame on ground at point selected under No. 1 above. Dig pit to depth of 5 ft. to the size corresponding to the frame.
4. Construct the foundation for the squatting plate as shown on the (drawing A-9) plans. Two courses of brick or a concrete ring sill should be placed at the original ground surface to support concrete slab. In cases of loose soil the pit should be lined with bamboo or other available material to prevent the walls from caving. The earth from the pit should be firmly tamped into a mound around the foundation and sloping from the latrine according to plans. (Note : Mound should be constructed after the squatting plate has been fitted over pit).

Construction of the Squatting Plate and Water Seal

The squatting plate and water seal may be constructed at the site of the latrine or at some central place and transported to it. Because of the water seal, this type is a little more difficult to make and, therefore, requires some practice and skill.

Details for preparing the moulds are shown in attached drawing A-9/1. Once the mould is prepared and with a little practice the construction of the plate and seal will be found relatively simple. The dimensions shown in the drawings should be followed very closely.

The concrete plate and water seal will require the following materials :

1. Expanded metal 4' \times 3' or reinforcement rods.
2. Two cubic feet of gravel $\frac{1}{4}$ " to $\frac{3}{4}$ " size.
3. One cubic foot of sand.
4. Half bag of cement.

The cement, sand and gravel in 1 : 2 : 4 proportion should be mixed well. Then a small amount of water is added to obtain the right consistency. Care should be taken so that too much water is not to be used as this will weaken the concrete.

The moulds are set in place with the wooden central block for making the opening. The inside of the frame should be smeared with grease or waste paper should be used so that the concrete will not stick to the frame. The concrete should be poured into the frame to a depth of 1½ inches then. The squatting plate is cast upside down. The expanded metal or rods should be placed on top of the concrete at this point. In a 2 inch slab it is important that this 1½ inches be measured correctly since reinforcement not in its proper place will not have the desired tensile strength.

The seal is cast separately in accordance with specifications shown in the drawings. For casting the seal, cement, coarse sand and fine gravel of $\frac{1}{4}$ " to $\frac{3}{4}$ " size should be used. Slab and seal should be allowed to set for 24 hours before mould is removed. Then surface should be given a smooth finish. The seal will be fixed into the slab, and the joints grouted at site.

Construction of Superstructure : The superstructure may be constructed with materials shown in Table I or with suitable locally available materials.

TABLE I

**Estimated cost of construction of water seal pit latrine*

1. Excavation of pit (43 cu. ft.)	2 0 0
2. Pit lining (18 sq. ft.)	4 8 0
3. Brick foundation	1 0 0
4. Concrete slab and water seal with about 5 lbs. of reinforced steel	12 0 0
5. Mud walls	5 0 0
6. Bamboo for door	3 0 0
7. Thatched roof (20 sq. ft.)	6 0 0
8. Post and framing	5 0 0
Total	38 8 0

*This estimate is based on Delhi Prices January 1955. By use of unskilled labour provided by the villagers and local materials this cost would be reduced to about Rs. 12.

The Simple Bore Hole Latrine

The bore hole latrine shown in drawing A-10 is one of the simplest types of latrines. The advantages of this type of latrine are : (a) it is cheaper than most types, (b) it reduces maintenance to the minimum, (c) it is simple and can be quickly built.

The disadvantages are : (a) The bore hole requires a special tool for boring, (b) it fills up very quickly, (c) it may be odorous when it gets filled upto a few feet from the top, and (d) it is not suitable in areas with high water table or where the soil is loose or/and unstable.

Construction details for bore hole latrine

1. Select a location as indicated under construction of pit latrine.
2. Use a special hand boring auger having a diameter of 16 inches. With use of extensions on the handle the hole may be bored to a depth of 20 feet.
3. In loose soils place bamboo lining, wooden planking or earthenware rings to extend to level of hard soil.
4. An earthen mound around the bore should be built as outlined previously under "Construction of Pit" and as detailed in drawing A-10.

Construction of Squatting Plate

The squatting plate is constructed as for a water seal pit latrine. The same form work may be used. Only the water seal is omitted and the recesses for it in the slab filled. As this slab shown in drawing A-10 is smaller than the one for the water seal pit latrine the outside forms may be adjusted accordingly.

TABLE II

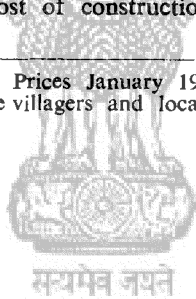
**Estimated cost of construction of a bore hole latrine*

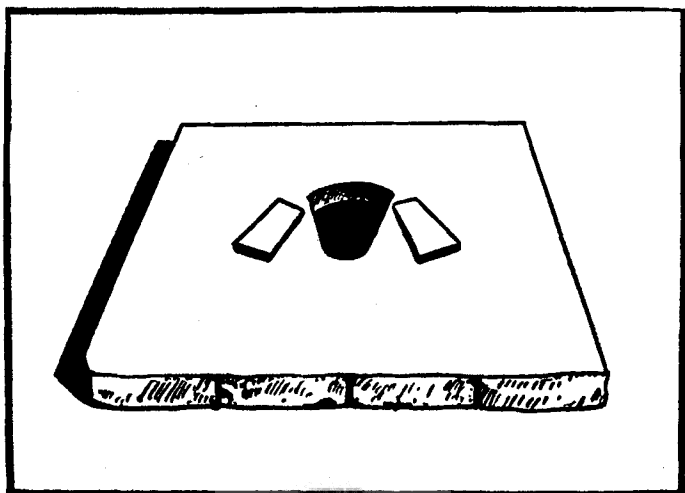
1. Boring a hole	..	..	..	4 0 0
2. Brick foundation	..	..	..	1 0 0
3. Concrete slab with reinforcement	..	..	..	7 0 0
4. Mud Walls	..	..	..	5 0 0
5. Bamboo for door	..	..	..	3 0 0
6. Thatched roof 20 sq. ft.	..	..	..	6 0 0
7. Posts and framing	..	..	..	5 0 0
Total				<u>31 0 0</u>

Other types of latrines

There are other types of latrines which may be equally satisfactory as those shown in this bulletin. However, after a review of practices and experiences in several of the States, this Directorate considers the two latrines described in this brochure as best representing the necessary requirements of sanitary latrine construction. The selections were based on their adaptability, simplicity of design and the low cost of construction, while maintaining adequate sanitary features.

*This estimate is based on Delhi Prices January 1955. By use of unskilled labour which should be provided by the villagers and locally available materials this cost can be reduced to Rs. 10.





APPENDIX X

LATRINES FOR HOUSES IN RURAL AREAS

Introduction

One of the grave sanitary defects of village life in India is the absence of latrines in houses. The public health problem created by improper disposal of excreta in rural areas is of a very large magnitude and calls for urgent solution.

One of the fundamental requirements for a society to live in a healthy and dignified way is to have a clean and sanitary environment. It is estimated for the country as a whole that less than five per cent of the dwellings have been provided with sanitary latrines.

In the seminar on "Village Housing" held during the month of June, 1958, at Mussoorie, one of the items discussed was that of latrines for rural areas which could be adopted in different parts of the country. As there are certain limitations in the adoption of different types of latrines, it was essential to study the local conditions before it could be decided as to which of the types will be best suited in any area.

The problem can be divided into two parts : (1) That of finding a suitable seat with pan which will be acceptable to all rural inhabitants. (2) That of a satisfactory method of disposal of human excreta.

The disposal of human excreta is an important part of Environmental Sanitation Programmes. How it can be effectively achieved in rural areas has been under the consideration of health workers for a long time. It is well known that intestinal diseases like cholera, typhoid, dysentery and hookworm prevalent in rural areas are responsible for tremendous losses in death and debility and that these are preventable through good sanitation and proper disposal of excreta.

Some designs of rural latrines were tried and used in the past; the need for suitable type that may be simple in construction, cheap in cost and above all acceptable to the people, still remained to be fulfilled.

The problem of evolving a suitable rural latrine has been engaging the attention of many people for a long time. Many efforts have been made towards developing successful type of latrines for different parts of the country; but the problem until recently could not be solved in a systematic manner. Many designs of latrines have been advocated for different areas depending, of course, on the local conditions, type of soil and the water table, but each has met with some difficulty in being accepted by the people.

The advice and information rendered by the sanitary engineers working in the Research Project of the Ford Foundation, and the technical assistance extended by experts of T.C.M. and W.H.O. need special mention in this connection.

In July, 1958 the National Buildings Organisation requested the various Research Institutes, Engineering and Development Departments and other Technical Organisations of all the States and Central territories to collect information on the practices prevailing in various parts of the country with regard to designs of village latrines. They were requested to intimate the details and results of research work that might have been done on this subject, together with new ideas if any, and results of such researches if tried in the field and the reaction of village inhabitants towards the same.

A questionnaire as per *Appendix A* was sent to various authorities mentioned above for filling in and returning the same to the National Buildings Organisation. The information received in response to the questionnaire has been tabulated and is given in *Appendix B*.

Latrine Seats and Pans :

The following institutions have carried out experiments and field trials on different types of latrines for rural areas :—

- (i) Research-cum-Action Project, Poonamalle, Madras.
- (ii) Research-cum-Action Centre, Najafgarh, Delhi.
- (iii) Singur Health Centre, Hoogly District, Bengal.
- (iv) Pilot Project on Environmental Sanitation, Trivandrum, Kerala.
- (v) Planning Research and Action Institute, U.P., Lucknow.
- (vi) Extension Training Centre, Bakshi-ka-Talab, Lucknow.

Several designs of latrines were evolved in the past but had to be discarded for the reasons given below :—

- (a) Foot Rests were set wide apart.
- (b) Splashing of night-soil.
- (c) Visibility of night-soil.
- (d) Splashing of urine.
- (e) Foul smell.
- (f) Fly nuisance.
- (g) Night-soil sticking to the pan.
- (h) Large quantity of water required for flushing.

Experiments had shown that most of the difficulties connected with the latrine design had to do with the squatting pan and its trap. Most of the complaints which came from people who had used various types of latrines pertained to the design of the pan or its seal. It was, therefore, considered desirable to evolve a type of seat and pan which will eliminate all the above drawbacks.

At the Singur Health Centre an improvement was effected by placing the squatting pan away from the pit and fixing a horn-shaped pipe to connect the two. Still there remained the bad odour nuisance.

After these preliminary experiences the concept of placing a simple water seal pan directly over the pit was developed in Bengal, at the Singur Health Centre. This was an improvement, but the main complaints against the design were that the water splashed upon the user and a large quantity of water was needed to flush it. After a few years' trial with this type of water seal, a Friends Rural Service Project in Orissa thought of making some improvements on this design. The shape of the pan was modified and the water seal was reduced. At the same time the construction cost was lowered. This improved design became more successful.

After taking into consideration the objections of users the following points were considered essential for a satisfactory seat and pan :—

- (i) A latrine should have water seal arrangement to check flies and foul odour with such a trap that requires minimum quantity of water to flush without clogging the trap.
- (ii) There should be no splashing of urine and the excreta should not be visible.
- (iii) The cost should be as low as possible and the services of sweeper should be eliminated.
- (iv) The squatting plate and pan should be easy to clean.

- (v) The foot rests should be constructed close to the pan so that there is no difficulty in squatting.

In addition, Public Health Standards demanded that the latrine seat etc., should be such as to prevent—

- (i) contamination of the ground or surface water that might seep or flow into drinking water wells;
- (ii) contamination of surface soil to avoid spread of parasite diseases.

Experiments on various types of latrine pans were conducted by the various research institutions and observations of the people who used them were recorded as a result of which, the following conclusions were arrived at :—

- (i) An efficient design of pan which would prevent urine from splashing out, is one with the front as deep as possible and preferably with a project lip. Also its length should not be less than 16".
- (ii) To avoid splashing of water from the trap the water seal should be as far down as possible from the user and preferably towards the rear. The shape of the pan should be sufficient to let the excreta slide away to the trap.
- (iii) The pan must either be of some commercial glaze preferably dark in colour or be so designed that the excreta drops directly into the water. In the latter case, however, the complaints of visibility and splashing of night-soil would still be present.
- (iv) It was felt that if a latrine pan could be made to flush clean with one *lota* of water, this would be ideal. If a large size of container was necessary to flush the latrine clean, it is very likely that many villagers would not use it in their houses.
- (v) The foot rests should be constructed rather close to the pan and should point outwards.

Other conclusions drawn were :—

- (i) that the quantity of water needed for flushing increases with the increase in size of water seal; and
- (ii) that the water seal should be funnel-shaped on the outside leading into a standard P-trap to provide better flushing of the excreta.

Recommendations for design of water seal squatting plate

A sanitary latrine should have a floor plate on which the eggs of ankylostoma will not hatch. All solid and liquid excreta must be collected at one spot and must not be accessible to flies, pigs, etc. The place must be suitable for washing and easy to keep clean.

All the requirements are met by a well designed concrete squatting plate with a water seal trap as shown in *Drawing No. 1*. It has a seal of $\frac{3}{4}$ " only with the result that the *ablution* water used ordinarily is sufficient to flush the pade and eject the excreta. This plate will avoid splashing and render the excreta inaccessible to flies.

Shape of Pan : From the observations made it was found that a good latrine pan should be designed according to the following specifications :—

- (1) The length of the pan should be at least 16" and need not be more than 18", as otherwise the cost would tend to go up. The minimum front width of the pan should be 5" and the width at the back between 7" and 9"
- (2) The depth of the pan in the front portion, should be at least 3" to prevent urine from splashing.

(3) Uniform slope from the front to the back portion for the bottom of the pan is preferred, the optimum gradient lying somewhere between 25° and 30° , so that flushing may be easier.

(4) The water seal should be as close to the pan as possible keeping in mind that the water should not splash on the user. To overcome this, the trap opening of the pan should be recessed backward by an inch and a half, so that plumb line dropped from the back portion of the top of the pan goes through the centre of the trap hole. The reverse slope given to the back face is just sufficient. A greater slope may cause manufacturing difficulties.

(5) The bottom neck of the pan should be 3" in diameter.

Trap : The commercial traps are 4" and larger, necessitating large quantity of water for flushing. To facilitate flushing with a smaller quantity of water the trap should begin with a 3" diameter at the top and may go down to 2½" or even 2¼" at the bottom giving a venturi type throat, which facilitates high velocity flushing. The outlet of the trap should have an incline of at least 15° to horizontal to provide sufficient slope for the connecting pipe.

Water seal : Water seal of ½" to ¾" having worked quite satisfactorily, it is felt that there is no need to increase the seal. The smaller the diameter of the trap and less the depth of the water seal, the less the quantity of water required for flushing.

Foot rests : The foot rests should be positioned so as to start from the centre of the large opening. With such positioning, the faecal matter drops on the slope near the water but not on the water surface. The heels should be raised a little, say ¼" for comfortable sitting. The foot rests should be raised at least by 1" above the level of the squatting plate and should point outwards.

Preliminary wetting of pan with a little water helps the excreta to slide into the trap more easily, minimises stickening and reduces the quantity of water needed for flushing.

It has been observed that if this type of latrine seat is adopted for community use it does not remain clean because if some user does not put in the full quantity of water for flushing, the next user does not like to do this job and often goes away to ease himself elsewhere. The latrine thus falls into dis-use. In the case of the same family this difficulty does not arise. It is, therefore, suggested that this type of latrine should be popularized for individual families only and for community use it may be used only where the services of a sweeper are available.

Methods of disposal of excreta :

Many type designs for latrines for satisfactory disposal of human excreta have been developed by the Environmental Hygiene Committee and R.C.A. for use in villages. These are as follows :—

- (i) Septic tank latrines.
- (ii) Bore hole latrines.
- (iii) Pit latrines.
- (iv) Dug well latrines (water seal).
- (v) RCA Latrine.

Bore hole latrines :

The bore hole latrine as per *Drawing II* is a self contained hygienic latrine for the rural family. It consists of a hole 14" to 16 in diameter dug in fairly soft and porous soil by a special auger to a depth of about 20 ft. or about 3 ft. below the water table. The concrete squatting plate is installed over the hole, and an enclosure is built around it for privacy. Excreta and ablution water

fall into the bore hole and undergo anaerobic digestion, which is facilitated if there is sub-soil water. The narrowness of the hole makes it dark and unsuitable for fly breeding. In very loose soil, the upper part of the hole has to be lined with some stiff materials, such as bamboo matting, or a short length of pipe or oil drum, to prevent caving in.

The bore hole gets gradually filled with digested sludge. When it gets filled to within 3 ft. from the ground, it is closed with earth, a new hole is dug, and the squatting plate and enclosure are re-erected over the new hole. The filling up of the bore hole with sludge therefore puts a limit to its life and more land is needed when the same has to be shifted.

In many villages specially in Bengal, where the sub-soil water is high and the soil is loose, it is often difficult to put down a bore hole deeper than 8 to 10 ft. as the loose soil keeps falling when the auger has gone 2 to 3 ft. below the water table. In such a bore hole, the effective column available for filling with digested sludge is only about 9.7 C.ft. (7 ft. depth and 16" dia). Such a hole will be filled by 1320 users, i.e. by a family of six depositing all excreta in 220 days. It would, therefore, be a handicap to the promotion of rural sanitation if a new bore hole to be dug for each small family so frequently.

Bore hole latrines with precast squatting slabs were tried in the States of Bengal, Uttar Pradesh, Punjab, Bombay, Mysore and Madras. These efforts met with some success, but there were practical difficulties in getting them installed inside the houses and in moving the latrine, to a new location after the bore hole was filled up.

Pit Latrines :

In this type of latrine a pit is dug so as to have a large volume at places where owing to hard soil, or a loose soil with high water table, it is not possible to dig a deep bore hole of large volume. If the pit is roofed over at top, the excreta can be made inaccessible to flies. A pit 3 ft. to 5 ft. long, 2½ to 2½ ft. wide and 5 ft. to 6 ft. deep may last for 2½ to 3 years under use by a family of six. At the end of that period it will get filled up with sludge to 2 ft. below ground. It must then be filled with earth up to ground level and a new pit must be dug.

If flood water gets into an unlined pit latrine or the sub-soil water rises high, conditions may become offensive. In a dry region a pit latrine will be quite suitable, provided the pit is roofed and rain water is excluded. This type of latrine also needs extra land.

Dug well latrines :

Dug well latrines are circular pits of about 30" diameter dug into earth to a depth of 10 to 12 ft. by manual labour. In case of sandy soils depth may be 6 to 7 ft. The well may be lined with pottery rings made locally (each 9" to 12" deep). As many rings as necessary may be used to retain the earth and to prevent sides, caving in.

At the top of the pit, an earthen or brick or concrete ring is provided and earth filled around so that the squatting plate is at least 9" above the ground level to avoid rain or flood water running into the pit.

A squatting plate of water seal type is usually placed direct over the well. A well 30 inches diameter and 10 to 12 ft. deep will fill up in about 4 years if it is used by 4 to 6 persons. When the well is filled up a new well can be dug close by and the same plate placed over it. Here again additional land will be needed for digging new wells.

RCA Latrines

In this type of latrine two pits, near each other, are provided which are kept away from the squatting platform. The platform is a permanent structure

with the pan and trap fixed in it and the trap is connected to one of the pits by a 3" pipe line. The pits are covered by split bamboo matting. The platform round the pan is 3" with a 5" thick brick retaining wall around. For an average family one pit serves for about 5 years and when it gets filled up, the pipe connection from trap is changed to the other pit. Thus the pits are alternated at intervals of about 5 years. From filled up pit the decomposed material is removed and used as manure and soil conditioner. (See *Drawing III*).

Size of the pits can be so fixed that each of them remains in use for about one year at a time. Pits should be lined with bricks on the top to prevent chances of collapse. The pits can be covered with bamboo mattings or branches of trees but reinforced cement concrete slabs are preferable. These pits require special attention during rains. There should be no stagnation of water near the pits. Their tops should have sufficient well-rammed earth with proper slope to flow off the water. Also after rains smearing with mud, bhusa and cowdung is necessary. Distance between the two pits should be at least 2 ft.

Wardha type trench latrines :

At Sevagram and other Ashrams, the use of the simple Wardha type trench latrine was advocated. Though its cost was very low, the main disadvantage with this was that each user had to cover his excreta with earth and the squatting foot rests had to be continuously moved along the trench. At many places there was insufficient space in the nearby fields to construct this type of moving trench latrines.

Pig latrines :

The main type of latrine used by the tribal people in N.E.F.A. except in Kameng Frontier Division, is the pig latrines, where pigs are kept in enclosures just below the squatting platform which help in the disposal of night-soil. This practice has been in vogue for many years. The N.E.F.A. Administration is not in favour of making any radical change in this ancient practice, except for suggesting slight improvements. In the present arrangement, the latrines are attached to the main rooms of the tribal houses which are not considered very satisfactory from health considerations. The tribal people are, therefore, advised to site their latrines a little away from the main building but connected with it by a covered passage. This has been accepted by the tribal people of certain divisions and effort is being made to spread this improvement to all villages in N.E.F.A. A sketch of the pig latrine used by the tribal people in N.E.F.A. is given in *Drawing IV*.

In Kameng Division, the night soil is collected by the tribal people in masonry troughs just below the squatting platform. These are cleared once in one or two months and used as field manure.

At the Administrative Centre stationed, in the interior areas, bore hole or pit latrines, with water seal squatting plates are being provided. At the Divisional Headquarters where water supply is adequate, septic tanks are adopted.

Recommendation for disposal System and design (construction details).

The ablution water will be sufficient for anaerobic digestion of excreta. The digested sludge is inoffensive and innocuous. The digested sludge may be used as manure for agricultural purposes.

The two-pit arrangement where the connecting pipe from the trap can be shifted from one pit when it gets filled up, to the other, is considered to be a satisfactory method of disposal.

Two pits are dug side by side leaving a space of 2 ft. between the two size of the pit may be 6 ft. x 3 ft. x 5 ft. deep or 4 ft. x 3 ft. x 5 ft. deep. The top of the pits are lined with bricks 9" high. The sides are packed with earth paste

or puddled clay. This will prevent entry of water from the sides. The top of the pits are covered with bamboo matting, tree branches and preferably with R.C.C. slabs, which are in turn covered with earth properly rammed.

The drain pipe connecting the trap with the pits, joins the pits at the corners and is projected inside so as to discharge the excreta at the centre of the pit. From the opening of the trap the pit should be at a distance of 2 ft. At the point at which the drain bifurcates should be provided an inspection chamber with a cover. The drain leading to the pit in use is closed when the pit is full and the choke in the other drain is removed for bringing the other pit into commission. The rotation goes on. However the use of this chamber could be obviated by the use of slants and bends as shown in *Drawing VI*.

Superstructure and precautions for use of sanitary latrines.

Superstructure : The most convenient size of the latrine room would be 3 ft. \times 3 ft. The seat is fitted at a height of about 2 ft. The bottom space is filled with earth paste. The superstructure should be at least 5 ft. high, to afford privacy but in case of a roofed structure, the height may be increased to 7 ft. The nature of structure varies according to the means of the family. A most ordinary structure can be constructed with bamboo posts at four corners and with bamboo matting as walling, with a bamboo matting door on the front side. Otherwise a bit more costly semi-permanent structure can be provided with wooden posts and corrugated iron sheets or asbestos sheets walling and roofing.

The floor of the latrine should be such that it can be washed and kept clean. The latrine shown in *Drawing V* is typical which fulfils the requirements of a suitable rural latrine for the following reasons :—

(1) It meets all the public health standards. If it is constructed properly, there will be no contamination of the ground or surface water or the soil around it. The excreta will not be accessible to disease carrying vectors if the pan is flushed properly after use each time.

(2) The pan conforms to the shape which people feel is most convenient. This eliminates objection due to splashing of urine or excreta from the water seal which have been found to be obnoxious to people, who have used latrine pans of other designs.

(3) It takes a very small quantity of water to flush. This eliminates the need for carrying a large quantity of water and is, therefore, likely to be used more frequently.

(4) The latrine structure occupies a minimum amount of space. Two pits have been provided for the disposal of night-soil for being used alternately. It eliminates the need to move the latrine structure to a new place after one pit gets filled up.

(5) By using the two-pit system, the night-soil can be reclaimed as valuable manure for agricultural purposes. It is important that the night-soil contents should be composted for a minimum of six months. A greater safety margin would be to advocate removing the pit contents once a year.

Precautions and directions for use of sanitary latrines :

- (1) Disinfectants should not be used.
- (2) The pits should be looked before and after rains.
- (3) There should be no water stagnation around the pits.
- (4) Only water should be used. Paper, cloth rags, etc., should not find their way as they will choke the trap.
- (5) Spill a little water on the seat before squatting (4 ozs. or 2 ozs.).
- (6) Flush it after use.

- (7) Place a pot permanently in the latrine to provide a constant supply of flushing water.
- (8) Warn the children not to put stones etc., in the trap, or to poke at it with sticks.

Note :

- (i) Sandy soil should always be avoided in construction of such latrines.
- (ii) The latrine should be at least 50 to 100 ft away from any source of drinking water supply depending upon such factors as type and porosity of the soil, depth and slope of the ground water table, etc.

References

(1) Sanitary latrines, published by Sanitary Engineering Department. All India Institute of Hygiene and Public Health, Calcutta.

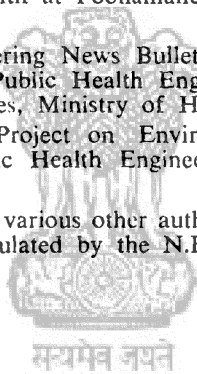
(2) Rural Health, Experiments on latrines for rural houses, published by Planning Research and Action Institute, Planning Department, Uttar Pradesh, Lucknow.

(3) Proceedings of the Engineering Conference on latrine research, convened by the Ministry of Health at Poonamallee, Madras on February 8 and 9, 1958.

(4) Public Health Engineering News Bulletin Vol. I, No. 1 of October, 1958, issued by the Central Public Health Engineering Organisation, Directorate General of Health Services, Ministry of Health, New Delhi.

(5) Report of the Pilot Project on Environmental Sanitation (January 1957—October, 1958). Public Health Engineering Department, Trivandrum, Kerala State.

(6) Reports received from various other authorities in reply to the questionnaire (*vide* Appendix A) circulated by the N.B.O.



QUESTIONNAIRE
APPENDIX A

Latrines for rural areas in different parts of India.

- (1) Localities—District or Region.
- (2) Type or soil met with.
- (3) Sub-soil water level :
 - (a) in dry season
 - (b) in wet season
- (4) Services available in the locality :
 - (a) water supply
 - (b) drainage
 - (c) conservancy (sweepers etc.)
- (5) Type of latrine used in rural areas.
- (6) Details of designs and specification of latrine (drawings, sections, etc. may please be attached).
- (7) Cost of construction of latrine.
- (8) Cost of maintenance of latrine.
- (9) No. of persons that can use the latrine.
- (10) Approximate percentage of houses having latrines.
- (11) Is there any scope of improvement in the latrine?
- (12) Any other information considered useful in the matter.



APPENDIX B

Latrines for Rural Areas in Different Parts of India. Authorities who have supplied the Information

Sl. No.	Questionnaire	Director, All India Institute of Hygiene and Public Health, Calcutta.	Director, Planning Research & Action Institute, U.P., Lucknow.	Development Commissioner U.P., Lucknow.	Planning & Development Department, Government of Madhya Pradesh, Bhopal
1	2	3	4	5	6
1.	Localities-District or Region.	Singur Centre, Hoogly District.	Lucknow District	Lucknow Bakshi-ka-Talab.	Whole M.P. State.
2.	Type of soil met with	Heavy Loam	Sandy loamy.	Sandy clay	Not of uniform nature but generally yellow soil or black soil.
3.	Sub-soil water level : (a) in dry season (b) in wet season	(a) more than 15ft below G.L. (b) about 8' to 10'	(a) 30 ft. (b) 24 ft.	(a) 24 ft. (b) 20 ft.	Not uniform, but generally, (a) 30' to 40' (b) 5' to 10'
4.	Services available in the locality : (a) water supply (b) drainage (c) conservancy (sweepers etc.)	(a) 646 Nos. 1½" dia. tube wells to serve 1,00,000 (b) None (c) No organised conservancy staff is available.	(a) Wells and Hand Pumps. (b) Open surface pucca and katcha drains. (c) Services of sweepers in a few village by private arrangements; mostly people go to fields.	(a) In very few villages. (b) Do. (c) Do.	(a) Available at very few places. (b) Not available (c) Not available

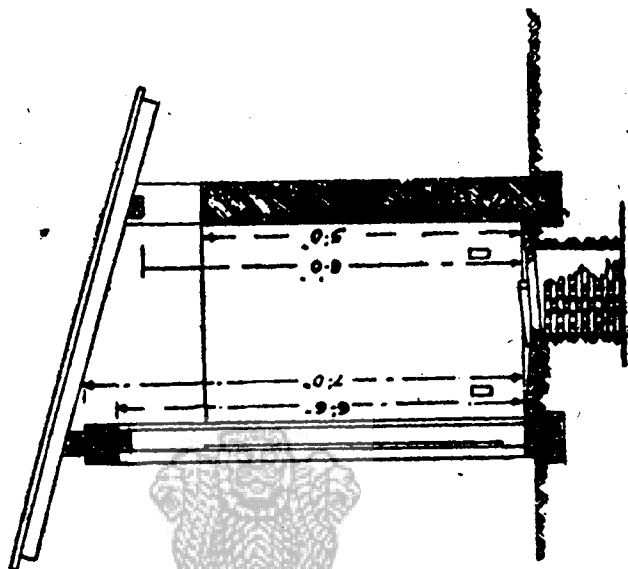
5.	Type of latrine used in rural areas.	(1) Bore Latrine. (2) Pit latrine with water seal pan. (3) RCA Latrine.	(1) Service type (2) Hand flush water seal latrine.	(1) Hand flushed trench type (2) Conservancy system also	People go in open fields. Sanitary Privy with water seal squatting plate is being adopted.
6.	Details of designs & specification of latrine (drawing, sec. etc.).	Dr. III attached.	—	—	—
7.	Cost of construction of latrine.	(1) Bore hole Lat. not advocated. (2) Pit Lat. Rs. 7-50 for plate and pan. (3) RCA Latrine cost of construction of platform Rs. 22. Maintenance done by individual owners.	Rs. 10 for the latrine pan & Rs. 5 for the platform superstructure of any local materials.	Rs. 50	Cost of water seal seat is Rs. 15. Superstructure cost varies from Rs. 50 to 110.
8.	Cost of maintenance of latrine.		No regular maintenance cost is required; arranged by villagers themselves.	Only manual labour	Nil
9.	No. of persons that can use the latrine.	7 to 8 persons in one family.	10-12 members of family.	8 to 10	5 persons.
10.	Approximate percentage of houses having latrines.	All types of latrines including pit type 8.5%	5%	10%	About 50 per cent.
11.	Is there any scope of improvement in the latrine?	Yes.	Better glazing of the pan.	Yes	Further improvements will be made after adopting the designs and watching results.
12.	Any other information considered useful.	—	—	—	—

APPENDIX B—contd.
Latrines for Rural Areas in Different Parts of India. Authorities who have supplied the Information

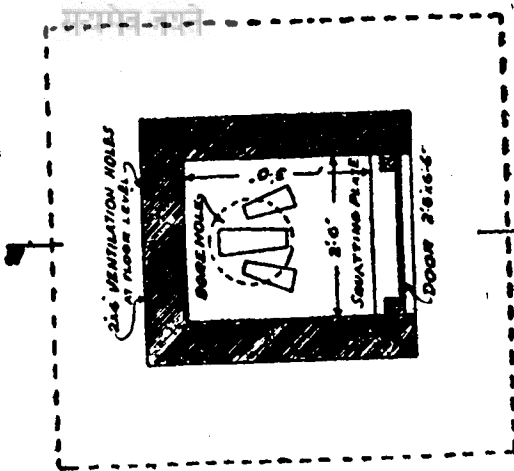
Development Commissioner Rajasthan, Jaipur.	Superintending Engineer, N.E.F. Agency, Shillong.	Admn. Officer Research-cum- Action Project, Poonamallee.	Army E-in-E's Branch, New Delhi.	H.Q. General Mana- ger N.E. Rly., Gorakhpur.	Conc. Association of India, Calcutta.
7	8	9	10	11	12
—	—	Tiruvellore Taluk, Chingleput district, Madras State.	—	Whole of N.E. Rly. (U.P.) & Bihar.	Distts. Nadia, Bardwan, Chinsurah of W. Bengal, Upper Shillong, Jorhat of Assam, Mon-ghyer of Bihar.
—	—	Clay in most of the places.	—	Silt.	In Bengal Sandy and clayey soil. In Assam Rocky and loamy soil.
—	—	(a) 20' to 40'	—	(a) 15' to 50'	In Bihar gravely soil (a) In Bengal 8' to 10' In Assam 10' to 12' In Bihar 15' to 20'
—	—	(b) 8' to 10'	—	(b) 10' to 30'	(b) In Bengal 3' to 5' In Assam 8' to 10' In Bihar 5' to 10'
—	—	(a) Open wells (Public)	—	(a) Tube wells, Pipe water supply at few places	(a) Tube wells, ponds and ordinary wells.
		(b) Nil.		(b) Surface drainage.	(b) Katcha drains.
		(c) Nil.		(c) Generally available.	(c) Sweepers only in township proper.

(1) Trench lat.	Pig Latrines	Water seal type in alternating pits or bore hole.	—	(1) Ordinary pan type	Generally open fields were being used. Dug well latrines are being encouraged for the last 4 years.
(2) Bore hole lat.			Some Blue prints were received.	(2) Aqua privy.	
(3) Hand flush latrines	Sketch attached. Drg. No. IV.	Rs. 40 with a semi permanent enclosure Rs. 80—100 with plastered brick wall enclosure.	—		Squatting plate and water seal trap including enclosed water of the latrine and roof with bamboo, chatai, matting and thatch cost Rs. 25 to Rs. 30.
—	—	Not available.	—		Maintenance only in digging pit after 5 to 6 years.
—	—	A family of 5 to 8.	—	5 Nos.	5 to 6 persons.
—	—	Latrines are only under construction.	—	50% in old construction. 100% in new constn.	In Bengal 15% to 25% In Assam 5% to 20% In Bihar 2% to 5%
—	—	Study is being carried out.	—	The aqua privy on this Rly. is popular.	
—	—	—	—	—	—

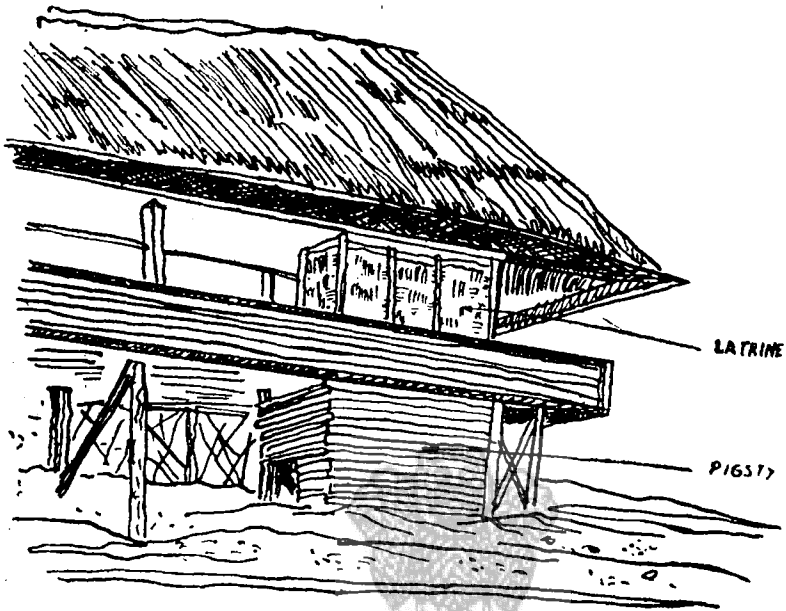
— BORE-HOLE LATRINE —



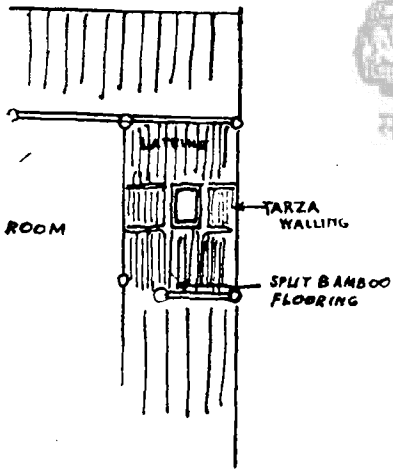
SECTION-AB



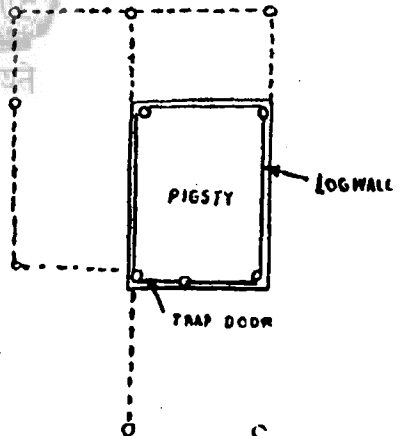
PLAN



SKETCH SHOWING REGUM
(TRIBAL LATRINE)



PLAN AT FLOOR LEVEL



PLAN AT GROUND LEVEL

APPENDIX XI

Copy of letter No. 55/W/2/80 dated 20-10-1955 from the Ministry of Railways (Railway Board), New Delhi, addressed to All India Railways.

SUBJECT—*Provision of Septic tank latrines.*

A reference is invited to the Board's letter No. 6978-W/XII dated 14-6-1950 (copy attached for ready reference).

2. The Board desire that the provision of septic tank flush-type latrines for upper class waiting rooms, third class waiting halls and platforms be pursued vigorously wherever piped water supply is available or can be made available conveniently and at reasonable cost.

Copy of letter No. 6978-W/XII dated 14-6-1950 from the Joint Director, Government of India, Ministry of Railways (Railway Board), New Delhi to All India Railways.

SUBJECT—*Report of Raman Committee on Health, Hygiene and Sanitation in M. & S.M. and S.I. Railways.*

In continuation of this office letter No. 6978-W/III, dated 5th June, 1950. The Board's decision on the recommendations made by the Committee in the Chapter I(b)—Conditions obtaining in Latrines or sanitary conveniences are contained in Annexure IX to XIV to this letter.

Chapter I(b)

ANNEXURE IX

TYPES OF SANITARY CONVENIENCES TO BE ADOPTED

Recommendation

Where water under pressure is available in adequate quantities, water-carriage system alone should be adopted.

Decision

The Railway Board have already stressed the need for the provision of Water-borne sanitation wherever it is necessary to provide it. The Committee have merely reiterated the Board's policy on the subject.

2. Recommendation

Where the quantity of water available is sufficiently copious, then the sewage from the sanitary convenience should be carried away through pipe-drains to a suitable site of disposal, which may be located some distance away.

Decision

The provision of underground sewers and the disposal of sewage at a site located some distance away from the stations is practicable for large railway stations and settlements only. The Committee's recommendation is, therefore, accepted for large stations only.

3. Recommendation

In cases where water is available just in quantities for the purpose of maintaining these sanitary conveniences clean, then the seats may be provided on the top of either imhoff tanks or septic tanks.

(a) Imhoff tanks should be provided where the settled sewage should be treated on land.

(b) Septic tanks in cases where the tank liquor could not be treated by sub-surface irrigation.

Decision

The use of one or the other type will depend upon local conditions, and it is, therefore, left entirely to the Railway Administrations concerned to decide as to which type would suit particular locations on their railway.

4. Recommendation

In situations where the sub-soil water conditions would not submit of either land treatment or sub-surface disposal of sewage, septic tank-cum-upward filtration should be adopted.

Decision

The type of sewage disposal to be adopted is left to the Railways concerned.

5. Recommendation

In places where water is not available excepting what the passengers carry for ablution purposes the sanitary conveniences of the 'leaching' cess-pool type should be adopted.

Decision

Each one of the following railways are to carry out an experiment with a "leaching" cess-pool type of latrines at one of the selected stations on their systems, and to submit a report in due course :

E.I., B.N., M. & S.M., S.I., G.I.P., B.B. & C.I., E.P. & O.T.

Chapter I(b)**ANNEXURE X***Bore Hole Latrines**Recommendation*

The men employed in Signal Cabins should have sanitary convenience nearby.

Decision

The Committee's recommendation is accepted as far as large stations are concerned.

*2. Recommendation**Urinals*

The provision of urinals should be adequate and independent of 'Latrines'.

The recommendation is accepted and may be implemented gradually. It is, however, noticed that at many stations, the Railway latrines and watering facilities are used freely and as a matter of course, by local residents—specially in congested areas. Railway Administrations should, therefore, guard against an unduly liberal scale of sanitary conveniences and provide only what is reasonable for staff and passengers against the local background.

Chapter I(b)**ANNEXURE XI***Sanitary Convenience on Passenger Platforms.**Recommendation*

Separate sanitary convenience on the passenger platforms for the exclusive use of the passengers who adopted the European style, should be abolished altogether.

Decision

While there is no doubt that European-type commodes are not necessary on passenger platforms standing type of urinals are necessary for passengers who use the western style of dress. The Railway Board accept the Committee's recommendation for abolition of separate sanitary convenience on the passengers who adopt the European-type as far as provision of commodes only is concerned.

*Sanitary Convenience in Waiting Rooms**2. Recommendation*

In providing sanitary convenience attached to the waiting rooms, the Indian style of squatting plate should be provided as a rule, but in one such convenience, tilting plank, somewhat on the model adopted by the South Indian Railway in their carriage closets, may be provided.

Decision

The recommendation in regard to the Indian style of squatting plate with tilting plank is not accepted. At important places where there are more than one unit of latrines attached to waiting rooms one unit may be of the European style and the others of the Indian style. At Stations, where a single unit only is available, it should be possible to provide both a commode as well as Indian type squatting plate, side by side.

Recommendation

In every sanitary convenience, water should be provided for washing in the cubicle itself. These ablution taps should be provided at suitable positions and at suitable heights. The taps should not be of the push type. Screw down taps are suitable for the purpose.

Decision

The provision of taps at suitable heights in the cubicles will be possible, where there is adequate water supply. The Committee's recommendation is accepted for each station.

सयमेव जयते

*ANNEXURE XII**Recommendation**Utility of Activated Sludge*

Activated sludge process of sewage purification is quite unsuitable for the conditions obtaining in the country.

Decision

The recommendation is an observation only and no action is at present called for. The views of the All India Institute of Hygiene & Public Health are, however, being obtained on the subject and would be communicated to the Railway Administrations when received.

*ANNEXURE XIII**Recommendation**Attendants*

Attendants should be posted for duty all the 24 hours both in the men and women sections of the sanitary convenience provided for Third Class Passengers, at important stations.

Decision

The recommendation should be considered as a proposal for a better utilization of existing staff. It is felt that at large stations it should be possible to implement the recommendations, without additional expenditure.

ANNEXURE XIV.

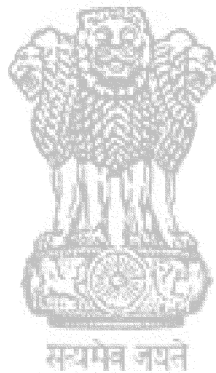
Recommendation

Shed for Conservancy Tools

A separate store room at some convenient place, should be provided to keep all conservancy tools and plant, adjoining it or as a part of it, facilities should be provided for conservancy staff for change of clothes, bathing, etc.

Decision

Railways should carry out this recommendation without incurring heavy expenditure.



APPENDIX XII

No. 1018/XI-A-15(57)/52

From

SRI K. N. SINGH, I.A.S.,
Secretary to Government,
Uttar Pradesh.

To

ALL DISTRICT MAGISTRATES,
Uttar Pradesh.

Dated Lucknow, September 15, 1952.

SUBJECT—*Rights over the night-soil collected by sweepers in a Municipal Area.*

Municipal (A)

Deptt.

Sir,

I am directed to say that Government have had under consideration the question whether the night-soil collected in a municipal area from private houses and public latrines is the property of the sweepers who collect it and whether these sweepers are at liberty to dispose of the night-soil in the manner they like. Sweepers of certain municipal boards are claiming proprietary rights over the night-soil collected by them; and to get their demand acceded, they have even resorted to strikes. After careful consideration of the matter in all its aspects Government have come to the conclusion that there is no force in the claim of the sweepers.

2. Sweepers, whether they remove night-soil from private latrines or from public latrines, are paid wages for such removal. Every municipal board appoints places where the night-soil so removed is to be deposited in the manner prescribed. When such places have been appointed, the board expect its sweepers to deposit the night-soil at those places on payment of fixed wages. All rubbish, filth, etc., collected by the board from the streets, houses and privies, etc., vest in the board under section 116(d) of the U.P. Municipalities Act, 1916. The night-soil collected by the employees of the board from public or private latrines is deemed to be collected by the board and vests in the board. No sweeper can legally or morally claim any proprietary rights over it.

3. The position of the night-soil collected from private latrines by customary sweepers, who are not municipal employees, is, however, a little different. It cannot be deemed to be collected by the board. It can vest in the board under section 116(d) of the said Act only when it is deposited in places appointed by the board under section 273 of the Act. So long as it is not so deposited it does not become the property of the board. The house owners (which includes occupiers, residents, etc.) are not, however, interested in the proprietorship of a stuff which they only want to get rid of as soon as possible. And, there is always an implied understanding between the house owners and the sweepers that the latter will dispose of the filth according to the rules that may be existing in that behalf and that no nuisance will be created thereby. The occupiers of a building or land from which an offensive matter, night-soil, etc., is removed and deposited otherwise than in a place appointed under section 273, are liable to be punished under section 274 of the Act. Similarly, any person contravening any direction of the board under clause (c) of section 273 is liable to be punished. In view of this provision of law every occupier of a house should be deemed to have an implied understanding with his sweeper that the latter will remove, carry and deposit the night-soil in accordance with the directions of the board in the matter.

4. Under section 273 of the Act, the board can appoint places for the disposal of night-soil and by public notice issue directions as to the time, manner and conditions at, in and subject to, which any offensive matter or rubbish may be removed along a street, deposited or otherwise disposed of. Thus the board can by a bye-law appoint a specified place for deposit of night-soil and other filth and rubbish; and once this is done, all sweepers, whether municipal employees or customary, have to abide by this direction; and when deposited at the specified place, the stuff becomes the property of the board and the sweepers cannot legally claim any right in it.

5. It has been contended by the sweepers that they have been enjoying proprietary rights over the night-soil collected by them from private houses for a very long time and the law should not override the custom. In this connexion, I am to say that the fact that sweepers in certain places have been appropriating to themselves the night-soil collected by them for a long period makes no difference in the legal position. All persons can by rules be enjoined to deposit night-soil at a place specified by the board and they will have to comply with the direction. If a custom is found to be against the public good, it cannot be continued as of right. Customs which are against public good or contrary to public morals and sense of decency or which are inconsistent with any previously established customary rights or have provoked strife or difficulty, are *per se* void.

Yours faithfully,
(Sd.) K. N. SINGH,
SECRETARY.

No. 10118(I)XI-A-15(57)/1952

Copy forwarded for information and guidance to :—

- (1) All Chairmen and Administrators of Municipal Boards in Uttar Pradesh.
- (2) All Chairmen of Notified Areas in Uttar Pradesh.
- (3) Director of Medical and Health Services, Uttar Pradesh.
- (4) Examiner, Local Fund Accounts, Uttar Pradesh.
- (5) Secretary to Government, Uttar Pradesh in Public Health Department.
- (6) Secretary to Government, Uttar Pradesh in Agriculture Department.
- (7) Municipal (B) and Local Self-Government Departments of the Secretariat.
- (8) All Commissioners of Divisions, in Uttar Pradesh.

By order,
K. N. SINGH,
SECRETARY TO GOVERNMENT, UTTAR PRADESH.

APPENDIX XIII

Explanatory Note regarding Flush Type Latrines.

The flush type latrine as proposed by the Corporation will consist of structure upto plinth only, a latrine seat, foot rests, P trap vent pipe and sewer pipe connections. As there is shortage of water, it is not proposed to put up W.I. tanks or flushing tanks. The W.C. will be flushed by the users by pouring water by a bucket after use.

Any owner of house of which annual letting value is not more than Rs. 180 will be given all help in construction of flush type latrine or conversion of existing latrine. The estimated cost of new latrine including 10' of sewer line only will be about Rs. 260. Wherein the main sewer is farther than 10', the cost will be Rs. 2 per Rft. extra. The cost of converting existing latrine will be about Rs. 200.

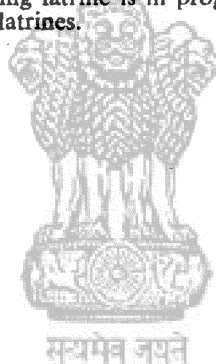
The landlord will pay Rs. 10 as fees for preparation of plans and Rs. 20 per seat as 1st instalment of return of advance. He will undertake to pay the balance in instalments of Rs. 20 each on 15th April and 15th October.

The payment of Rs. 30 (Rs. 10 for plan and Rs. 20 for instalment) should be made in the office of the Nagpur Corporation, together with the application form duly filled. The applicant will then sign an agreement on stamp paper.

While conversion of existing latrine is in progress, the occupants of the house will have to use some other latrines.

Dated 22nd May 1958

(Sd.) D. N. DADABHOY
DEVELOPMENT ENGINEER,
NAGPUR CORPORATION.



APPENDIX XIV

Note from the Govt. of Madras on the cost etc., on the slum clearance scheme— Foreshore tenements scheme area.

In pursuance of the Slum Clearance/Improvement Scheme, a project costing nearly 41.58 lakhs for the construction of 45 pucca tenemental blocks for housing about 900 families, mostly fishermen, who will be displaced from the four slums of Nochikuppam, Doming-Kuppam, Mullikuppam and Srinivasapuram all located on the Santhome Foreshore, Madras was approved by the Union and State Governments, and is under implementation, by the Madras City Improvement Trust. In implementing the slum clearance scheme, two important principles are always borne in mind, namely (1) minimum dislocation to slum dwellers, and (2) minimum standards of environmental hygiene and essential services. Under this scheme the State Government after giving a matching subsidy of 25% is entitled to financial assistance from the Union Government by way of 37½% subsidy and 37½% loan for implementing the scheme.

The present project is for constructing 45 tenemental two storeyed blocks, each consisting of 20 tenements (10 in the ground floor and 10 in the first floor). Each tenement has a floor area of 282 Sq. ft. and will have all the essential amenities provided, namely, Corporation drinking water supply and well water supply, independent drainage electric (domestic and street) lighting. Each tenement or apartment has its own independent bath and F.O.L.

The Colony is served by 3,800 running feet of metalled roads, to be finished ultimately with blacktop. The Colony will have a school, a Community Centre and a shopping area to cater to the requirements of the residents. The proposed Marina Extension eighty feet road, with side walls will skirt the Colony in due course on the East and the South. There will be small corner parks, and a fair-sized playground for the Children. Shady avenue trees are being planted along all the roads. About 25 cubicles for the fisher folks to store their nets are expected to be provided by the Fisheries Department somewhere between the tenements and the sea-shore. A long R.C. platform to dry nets is also likely to be provided by the Trust. The Government are also considering a proposal to provide a place at the mouth of the River Adayar close by, where catamarans and small fishing boats could be stored up.

The area acquired for this new colony, at a cost of about Rs. five lakhs, comprises about thirty acres, of which the extent covered by buildings is only about four acres. Hardly 1/7 of the total area is covered by the tenements. With 900 tenements, the density per acre is only 30. The cost of each apartment when completed with all amenities, including cost of land development will be about Rs. 4,620. The subsidised rent per month will be about Rs. 12.50 nP., while the economic rent will be double this sum.

There is plenty of open space around the buildings, with the other open spaces like roads, parks, and play-grounds. This project when completed will be the first to provide pucca tenements for slum-dwellers in Madras State under the current slum clearance scheme of the Government of India.

The City Improvement Trust has now taken up the first stage of construction of 500 tenements only with all amenities. The amenities now provided for 500 tenements will also serve for the remaining 400 tenements which will be constructed later on.

The cost of construction of 500 tenements with all amenities is furnished in the statement enclosed.

(Sd.) S. L. N. MOORTHY
SPL. ENGINEER

Foreshore tenements scheme—Statement showing estimated cost for construction of 500 tenements.

S. No.	Description	Estimated Cost.
		Rs.
1.	Construction of 25 blocks of 20 tenements each @ Rs. 67,000 per block	16,75,000
2.	Formation of road with block topping, etc.	47,675
3.	Filling of low-lying area with sand	99,210
4.	Providing amenities such as water supply, drainage, lighting, sanitary fittings, etc.	4,70,000
5.	Providing water main (Drinking water supply)	49,000
6.	Providing street lighting	68,500
7.	Cost of acquisition of lands	5,18,334
8.	Planting avenue trees	3,350
9.	Providing spun pipe culverts	3,000
10.	Contingencies and Unforeseen charges	1,01,281
	TOTAL	30,35,350

(Sd.) S. L. N. MOORTHY
FOR CHAIRMAN

Details for amenities (Working estimate)

Independent Water Supply.

1.	Construction of 3 Nos. Infiltration well and laying and jointing syphon pipes etc.	14,210
2.	Supply and delivery of C. I. pipes and specials	34,310
3.	Construction of an elevated R.C.C. Reservoir	53,676
4.	Constructing pump house, supply and erection of 2 Nos. pump sets, including suction and delivery pipes and supplying, laying & jointing 6" C. I. pumping mains	16,694
5.	Laying pipe lines, other specials and unforeseen charges	5,000
	TOTAL	1,23,890

II. Providing W.S. pipes and fittings and service connection.

Water supply.

1.	Water supply House service connection for Tenements of Blocks I to V	8,700
2.	Water Supply House Service connection for Tenements of Blocks VI to X	9,900
3.	Water Supply House Service connection for Tenements of Blocks XI to XV	8,500

4. Water Supply House Service connection for Tenements Blocks XVI to XX	Rs.
	8,700
5. Water Supply House Service connection for Tenements of Blocks XXI to XXV	9,100
TOTAL ..	44,900

II. *Providing Electric lights and service connection.*

Electric Connection.

	Rs.
1. Providing Electrical fittings to Tenements of Blocks I to V	8,700
2. Providing Electrical fittings to Tenements of Blocks VI to X	8,700
3. Providing Electrical fittings to Tenements of Blocks XI to XV	8,700
4. Providing Electrical fittings to Tenements of Blocks XVI to XX	8,700
5. Providing Electrical fittings to Tenements of Blocks XXI to XXV	8,700
TOTAL ..	43,500

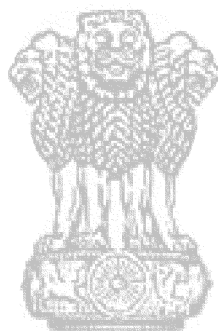
Drainage Connections.

	Rs.
1. Providing Sanitary fittings and underground drainage service connection to tenements of Blocks I to V	24,600
2. Providing Sanitary fittings and underground drainage service connections to tenements of Blocks VI to X	24,600
3. Providing Sanitary fittings and underground drainage service connections to tenements of Blocks XI to XV	24,600
4. Providing Sanitary fittings and underground drainage service connections to tenements of Blocks XVI to XX	24,600
5. Providing sanitary fittings and underground drainage service connections to tenements of Blocks XXI to XXV	24,600
TOTAL ..	1,23,000

V. G. Dr. Scheme

	Rs.
Construction of Sewer	31,750
Construction of Out fall sewers, suction well and pump well	40,000
Construction of Aerobic and Anaerobic Lagoons for treatment and disposal of sewage at Forshore Tenements Scheme Area	48,800
TOTAL ..	1,20,550

Independent Water supply (Non-drinking)	Rs.
.. .. .	1,23,890
Providing Water supply pipes and fittings and service connections	44,900
.. .. .	
Providing Electric lights and Service connections	43,500
.. .. .	
Providing Sanitary fittings and underground drainage service connections	1,23,000
.. .. .	
Underground drainage scheme	1,20,550
.. .. .	
Add for unforeseen items	14,160
TOTAL	4,70,000



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APPENDIX XV

Note on the Cost, etc., on the Slum Clearance Scheme, Namasivayapuram

Namasivayapuram was a slum that existed on Government land on the Sterling Road near the Nungambakkam Station. The huts were situated in very low-lying areas in the midst of insanitary condition.

This Scheme has the distinction of being the first Slum Improvement Scheme in the whole of India to be sanctioned by the Union Government. As the area of the slum was not sufficient to rehouse the existing families, the C.I.T. acquired vacant adjacent land. But even this was not sufficient. So it was proposed to rehouse part of the population (*i.e.*) 357 families in the existing slum area after development and adjoining vacant private land. Provision was made for 175 families in part of Trustpuram which is only about a mile from the slum area.

The project for 532 open developed plots at a cost of Rs. 6,65,000 was approved by Government in G.O.Ms. No. 3302, I.L. & C., dated 26-8-1959. The cost per plot works out to Rs. 1,250 which is the ceiling cost fixed by the Government of India. The Scheme is eligible for financial assistance as indicated below :—

37½% of the cost of the Scheme as loan from Govt. of India.

37½% of the cost of the scheme as subsidy from Govt. of India.

25% of the cost of the scheme as subsidy from State Govt.

Each family is allotted an open plot of size (35' × 25') measuring about 875 Sft. in Part I Scheme and with open plots size (40' × 22') measuring about 880 Sft., in Part II Scheme.

300 Sq. ft. × 1' high earthen platform is provided for each plot. A pucca F.O.L. 4' × 3' size and a pucca open bath 4' × 4' are provided for each plot. Building materials worth about Rs. 125 plus Rs. 25 (Twenty-five) in cash are given to each family for constructing a hut.

In Part I area about 500 Rft. of 60' wide road with 16' wide tarred surface was provided. About 250 Rft of 30' wide road with 15' wide tarred surface, and about 6,400 Rft of 20' wide road with 8' wide tarred surface were provided.

In Part II area, about 300 Rft of 30' wide road with 14' wide tarred surface was provided. About 650 Rft. of 20' wide roads with 8' tarred surface and about 1,400 Sft of 20' wide access ways with 4' wide paved surface on either side, for a length of 2,800 Rft. were provided.

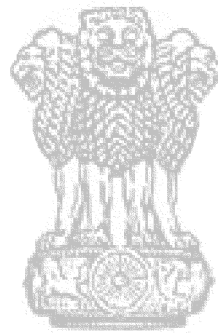
Electric street lights are being provided for all roads and access ways in Part I and in Part II Scheme area, the roads have been electrified.

As the Corporation of Madras has expressed its inability to provide water-mains in Part I Scheme area, a 6 dia. well has been constructed. Drinking water supply is being provided through public fountains.

In Part II Scheme area, the Corporation of Madras, has already provided public fountains.

Trees have been planted at 30' intervals and staggered in order, not to be in front of each other. As there are no sewer mains in the nearby area, septic tanks have been constructed.

(Sd.) D. GNANAOLIVU,
CHAIRMAN



सत्यमेव जयते

Page No.	Line	For	Read
55	36	necessary wherever	necessary. Wherever
	50	that Corporations	that in Corporations
	51	afford such	afford, such
60	48	aid., can	aid can
68	4	but is	but it is
78	6	not improve	not only improve
92	44	reverse printed line	The officials handling the problems are not also properly equip-
95	Second sub-para	Marginal heading	Vigilance Committee
106	2	'Safai Mazdoor'	'Safai Mazdoor'
107	6	dust-bin	dust-bin

Screening Conditions Inquiry Committee Report

E R R A T A

Page No.	Line	For	Read
21	24	should also be compelled to use covered buckets which can be	should be supplied to the scavengers. Each bucket normally
24	30	that	there
36	24	wheel/	wheel
25	25	work (as on 28-7-1960)	barrage, hand carts:-
30	30	work.	work (as on 29-7-1960).
43	48	47	46
45	3	pushing oftes unchained.	pushing oftes and often omit (.) after unchained.
47	35	bullock carts. Bhensa	bullock carts, bhensa
48	39	radium	medium
52	24	them of	that off
54	19	splashing about night-soil in the process and after	through an outlet. In Madras, at the depots, bullock



Fig. 1

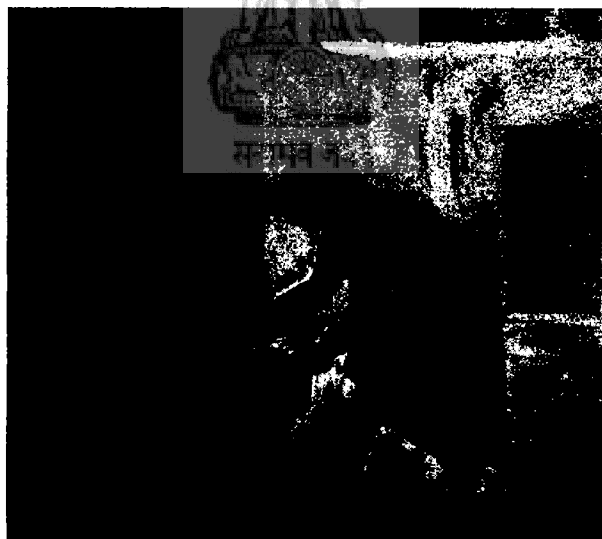


Fig. 2

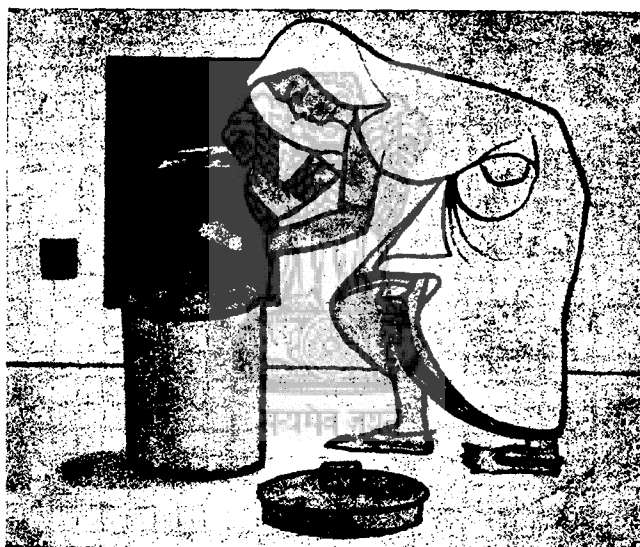


Fig. 3

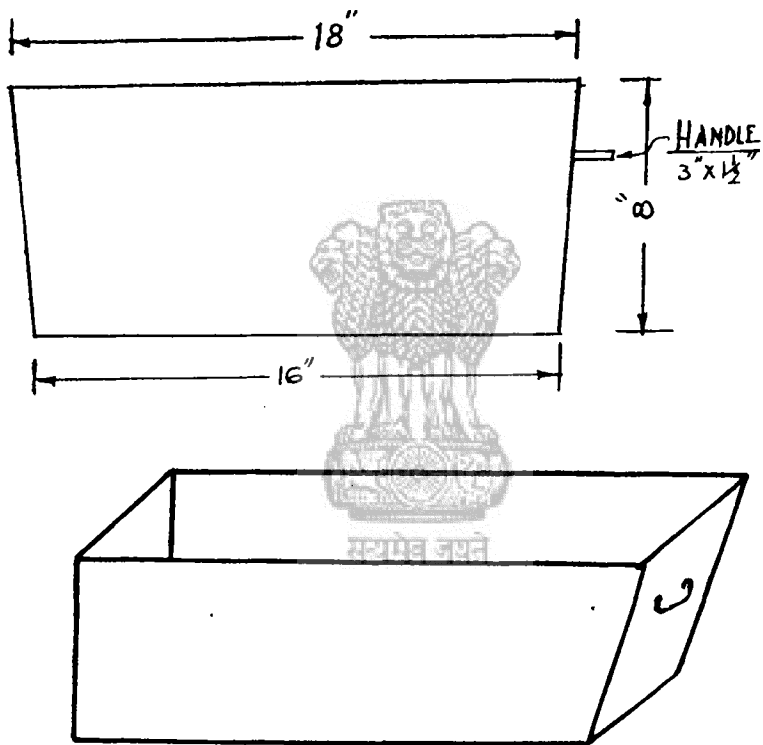


Fig. 4

D.P. Circular Pans with 8½" Dia.

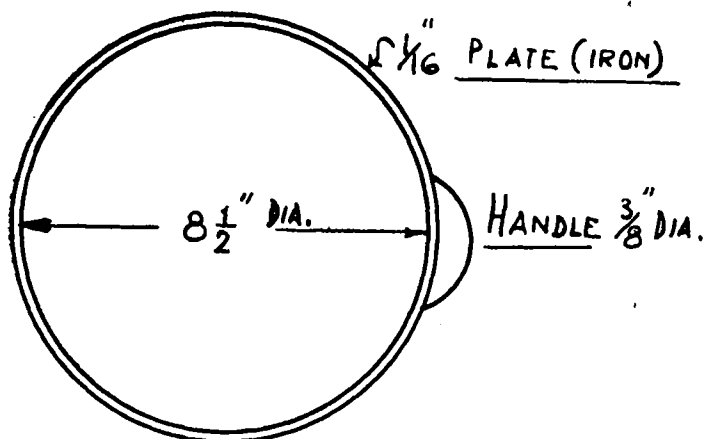
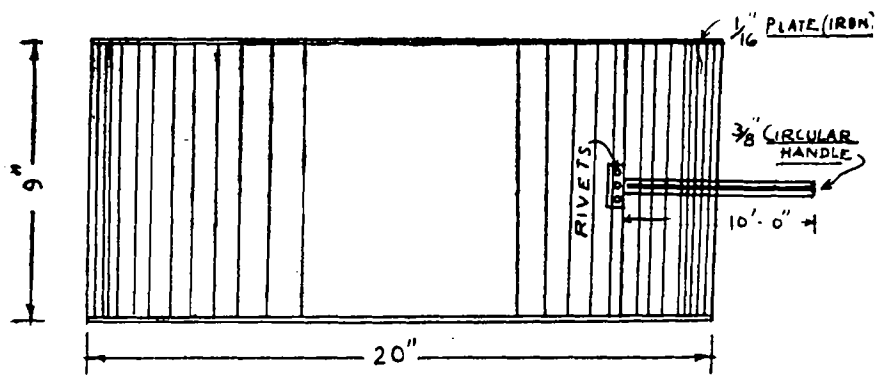
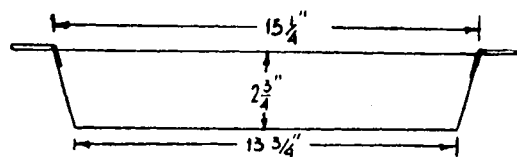


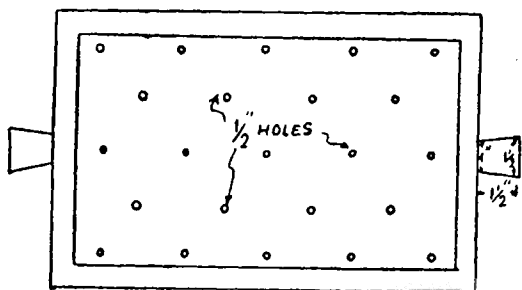
Fig. 5

LATRINE PAN IN USE FOR S.E. RLY. STAFF QRS.

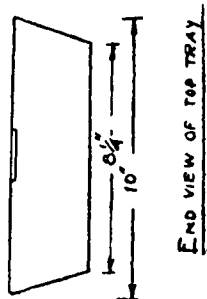
Three inches=One foot



SIDE VIEW OF TOP TRAY

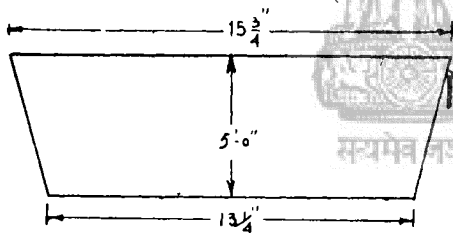


PLAN OF TOP TRAY

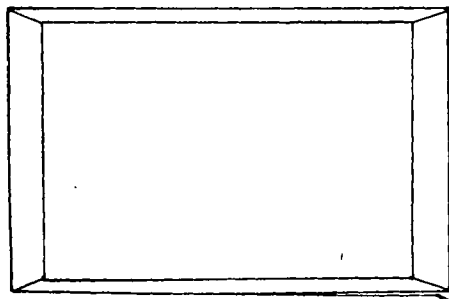


END VIEW OF TOP TRAY

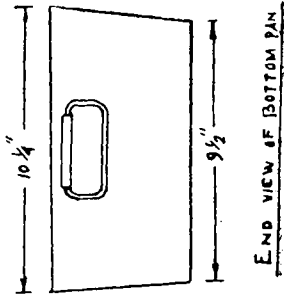
BOTTOM PAN



SIDE VIEW OF BOTTOM PAN



PLAN OF BOTTOM PAN



END VIEW OF BOTTOM PAN

3" x 1"

Fig. 6



Fig. 7

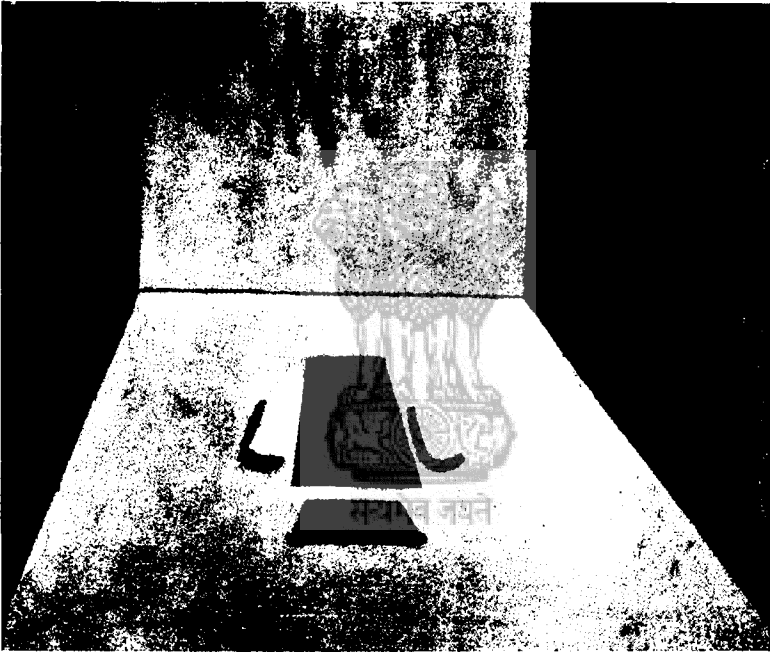


Fig. 8

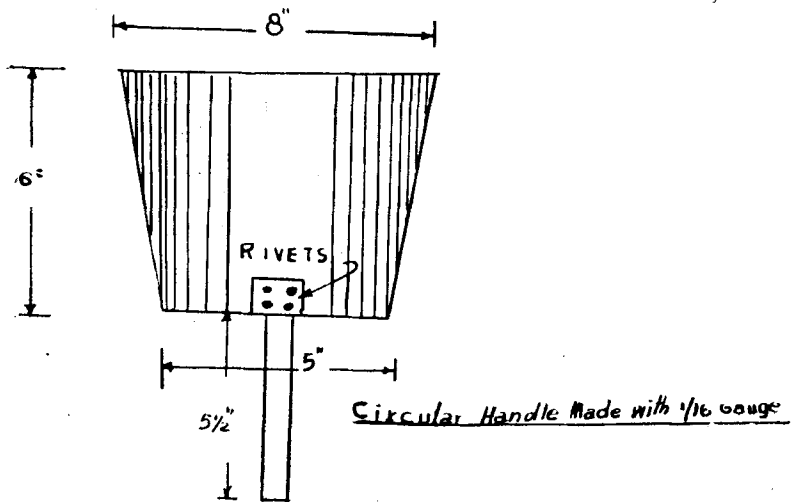
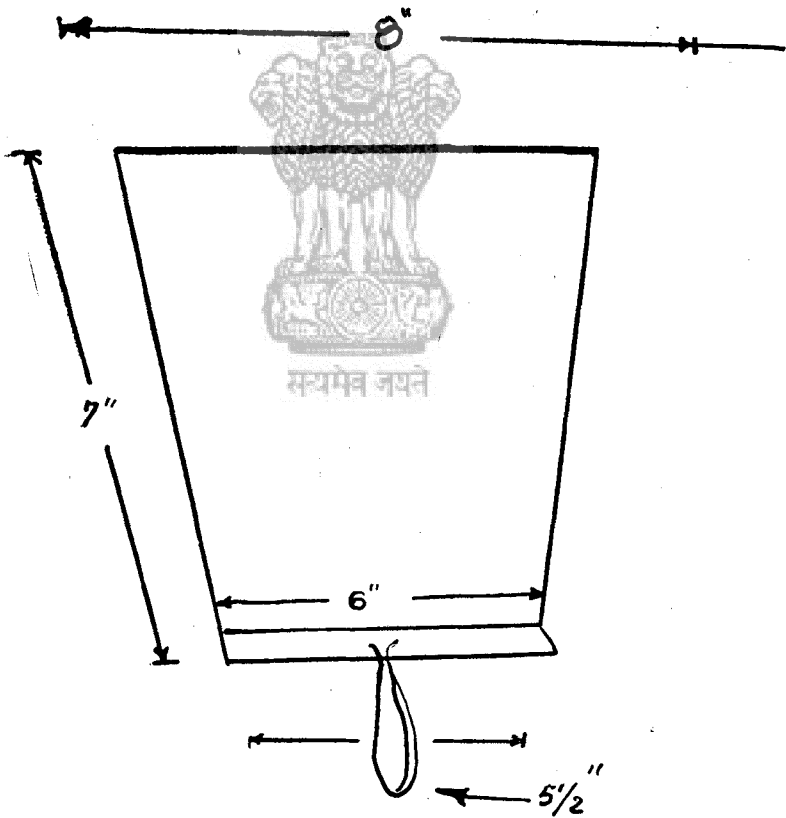


Fig. 9



M.S. Plate 24 Gauge
or
Asphalt Empty Drum Plate
Rivets Size $\frac{1}{2}" \times \frac{1}{4}"$

Fig. 10

Plan of Khurchan Scale Half Full Size

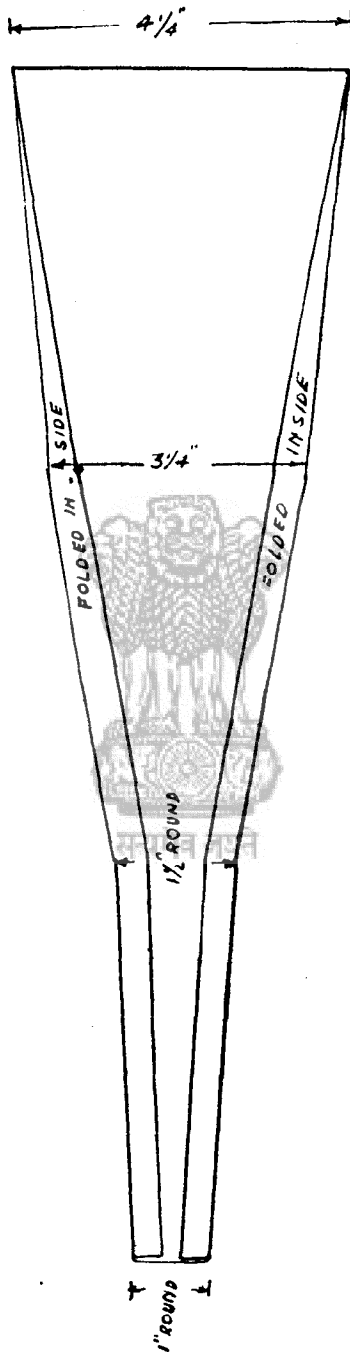
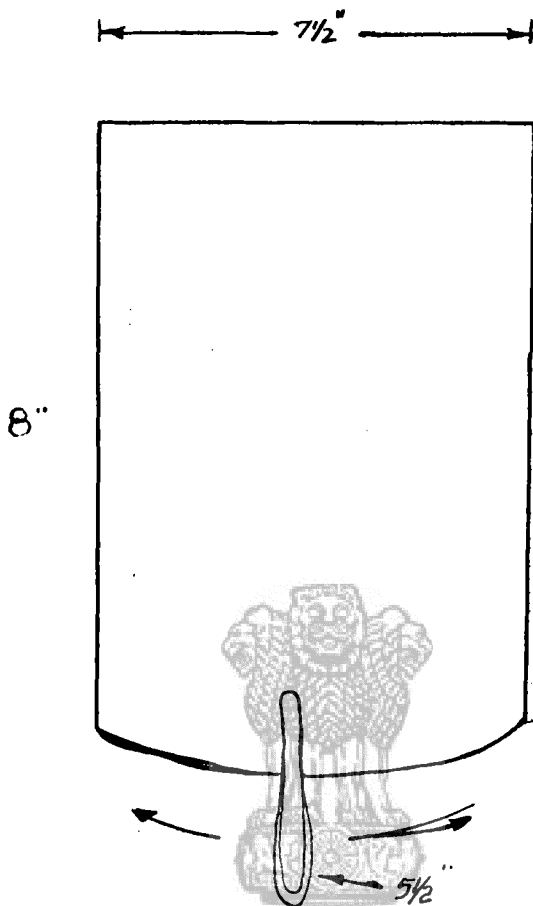


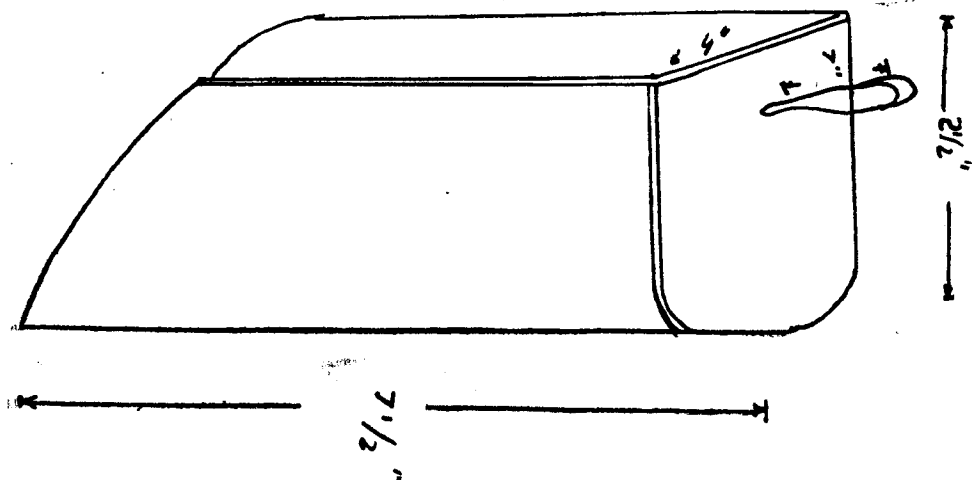
Fig. 11



M.S. Plate 24 Gauge
or
Asphalt Empty Drum Plate
Rivets Size $\frac{1}{2}$ " \times $\frac{1}{4}$ "

Fig. 13

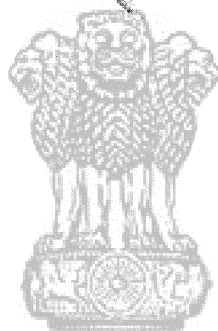
Drain Scraper



M.S. Plate 24 Gauge
or
Asphalt Empty Drum Plate

Fig. 12





सत्यमेव जयते

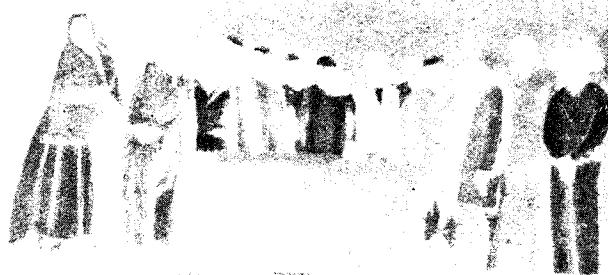
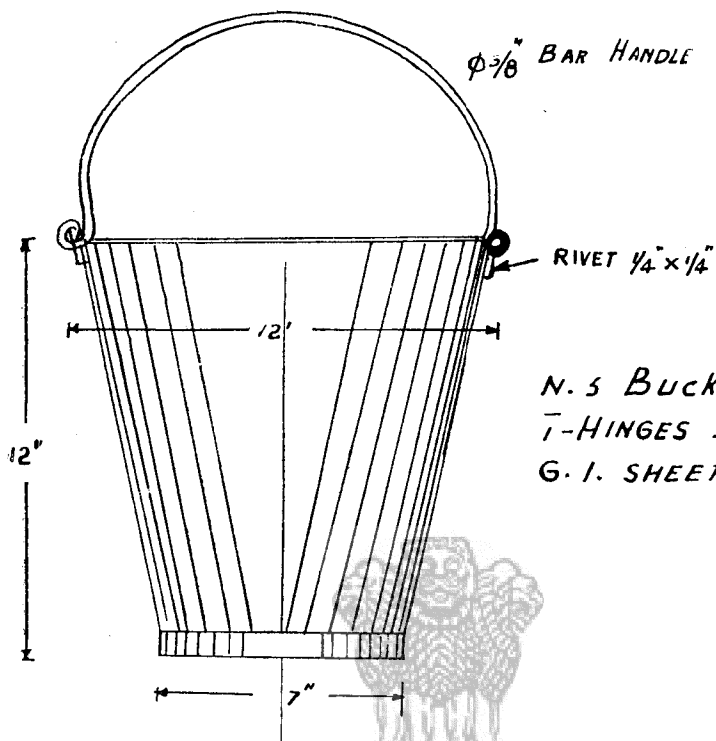




Fig. 16



Fig. 17



N. 5 Bucket

1-HINGES 3"

G. I. SHEET 24 GAUGE

NIGHT SOIL BUCKET

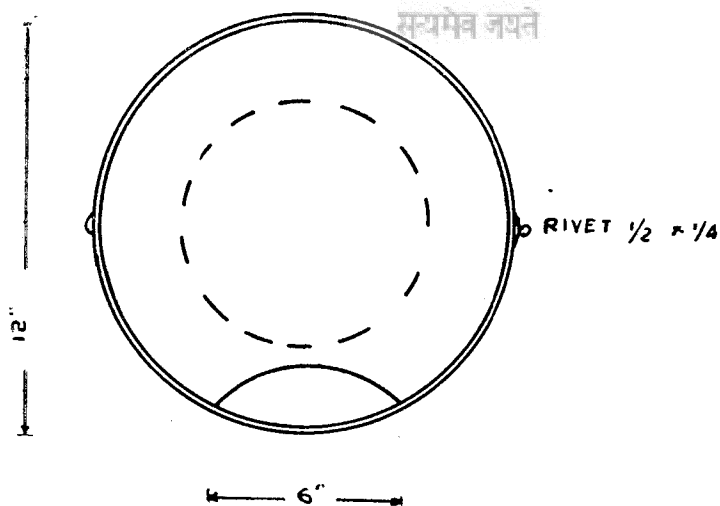


Fig. 18

(Ordinary Size)

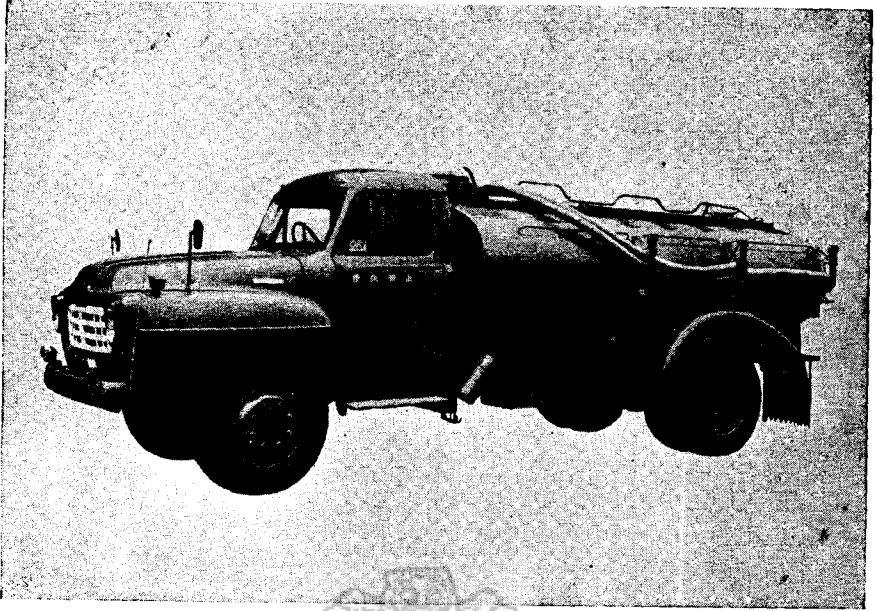


Fig. 19

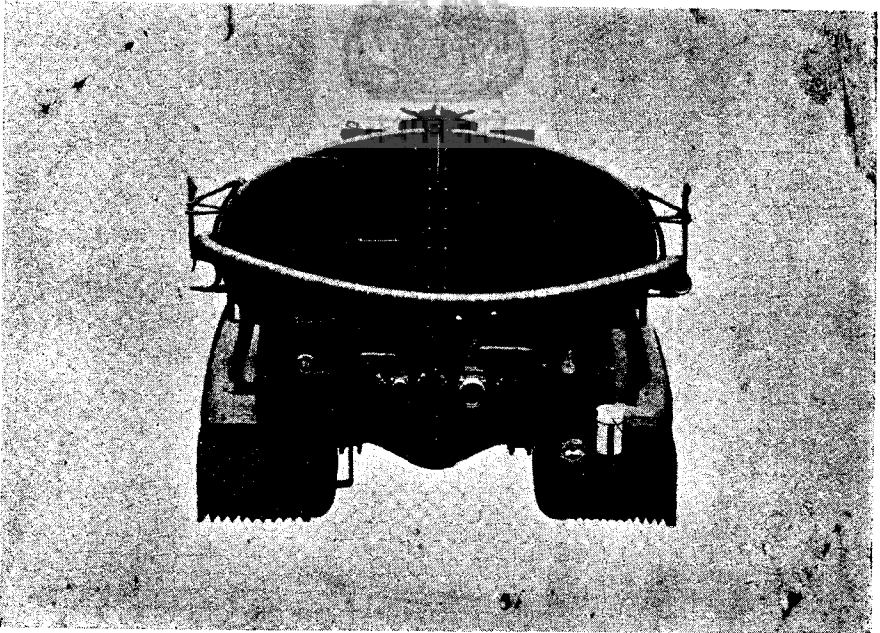


Fig. 20

(Smaller Size)



Fig. 21

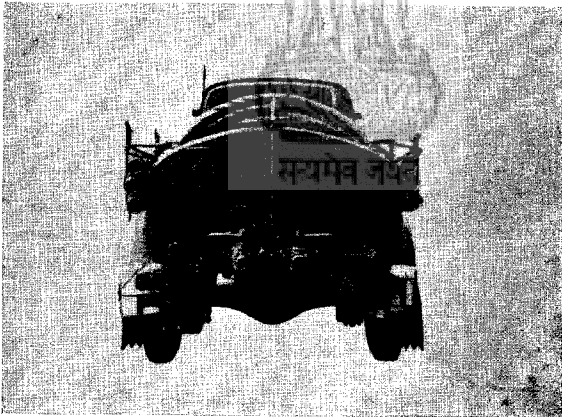
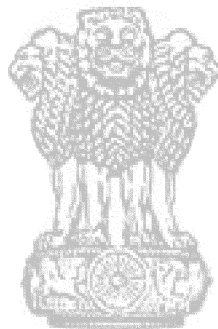
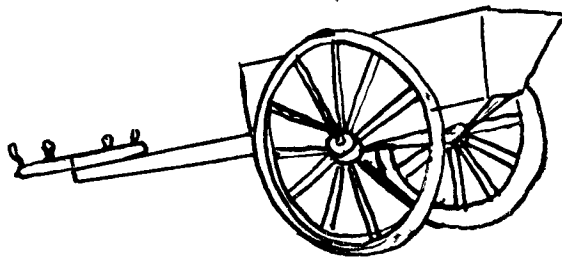


Fig. 22



सत्यमेव जयते

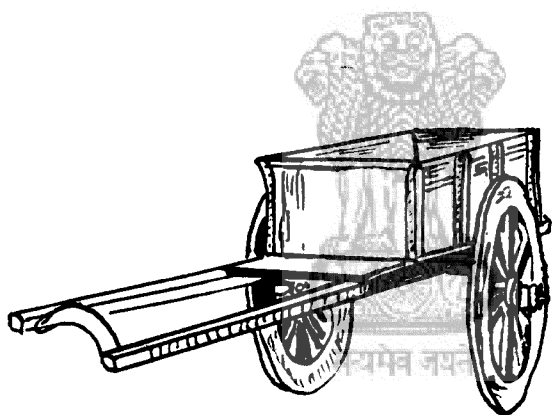
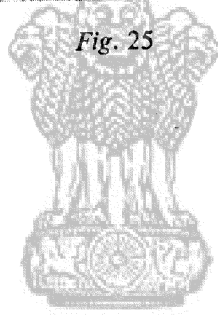


Fig. 24



Fig. 25



सत्यमेव जयते

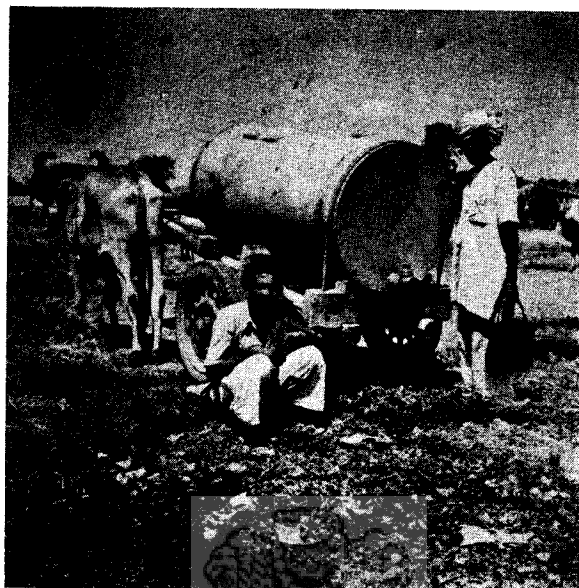
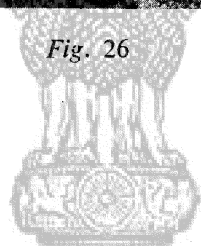


Fig. 26



सत्यमेव जयते

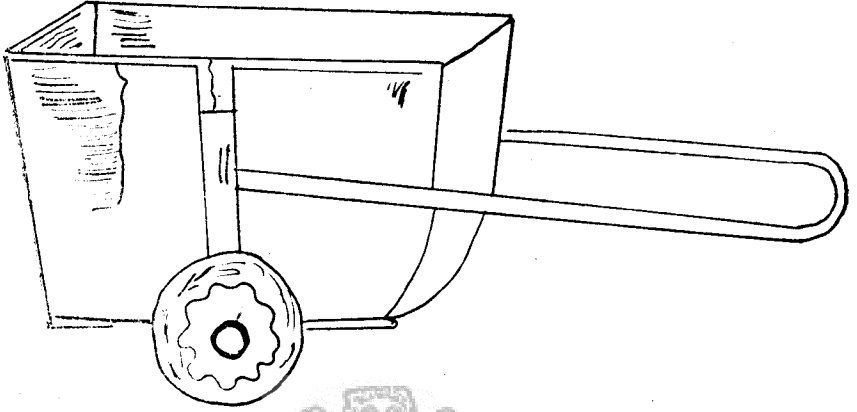
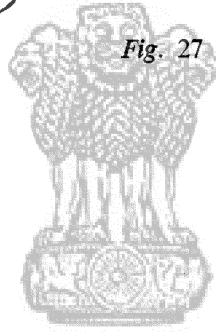


Fig. 27



सत्यमेव जयते

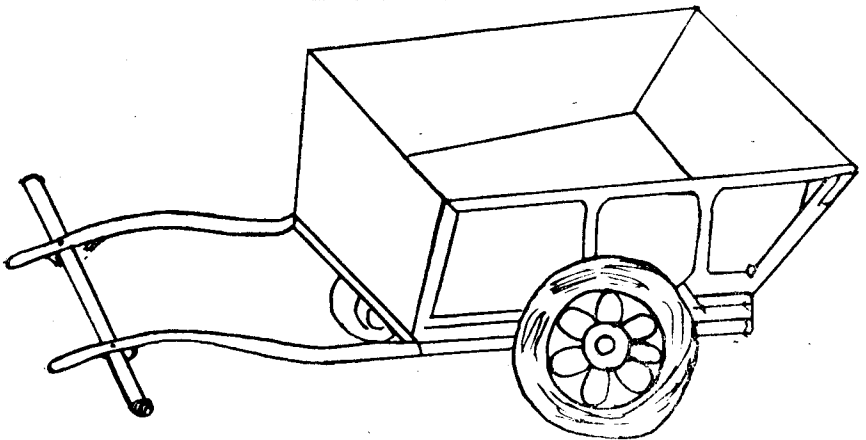


Fig. 28

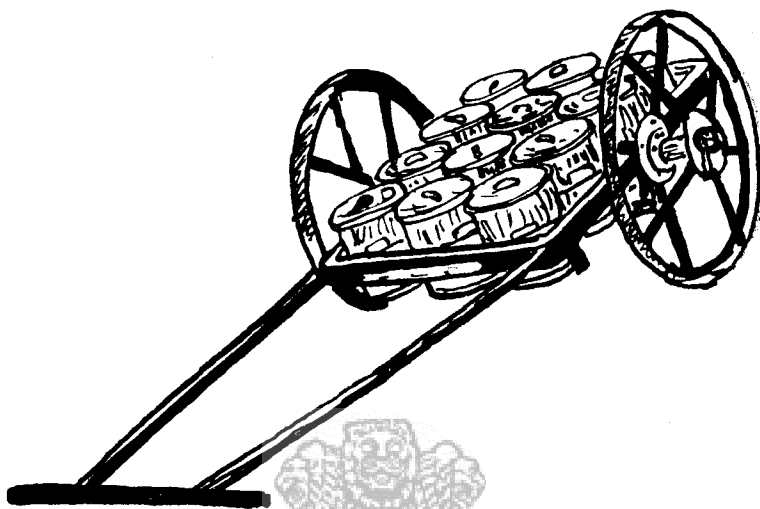


Fig. 29



सत्यमेव जयते

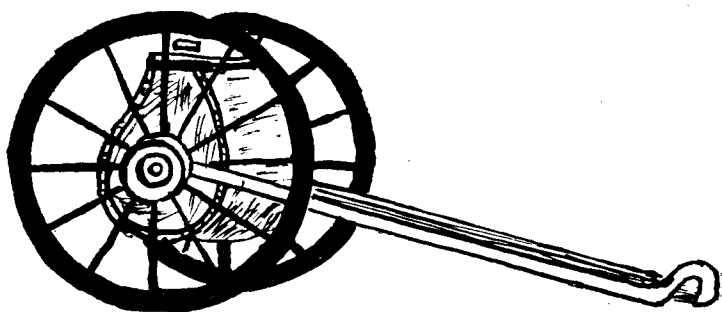


Fig. 30

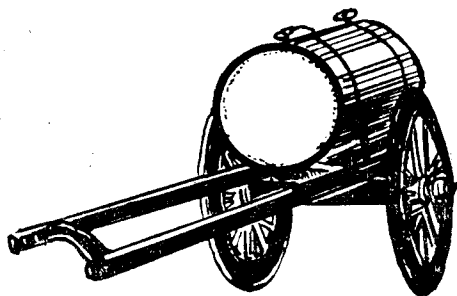


Fig. 31

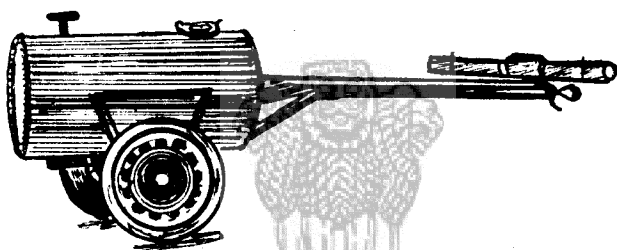


Fig. 32

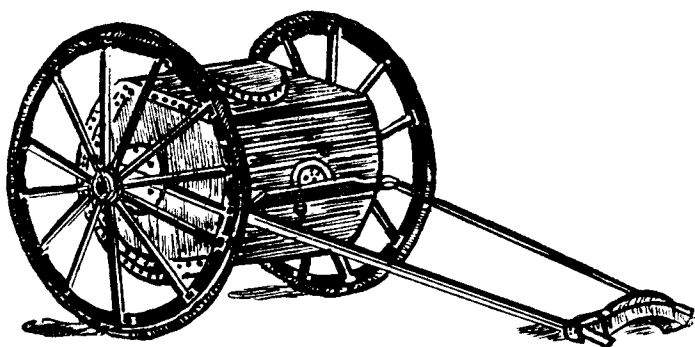


Fig. 33

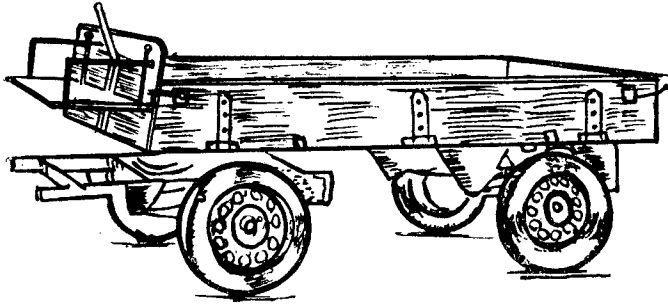


Fig. 34

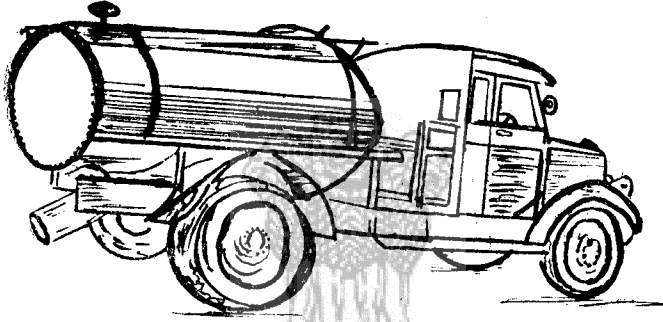


Fig. 35

सयमेव जयते

(Smaller Size)

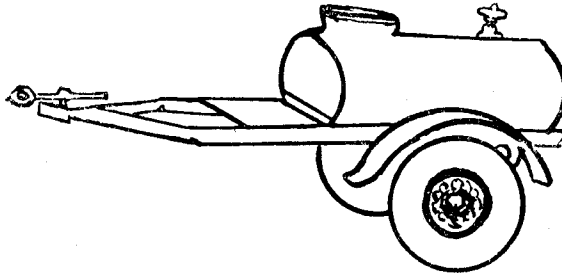


Fig. 36

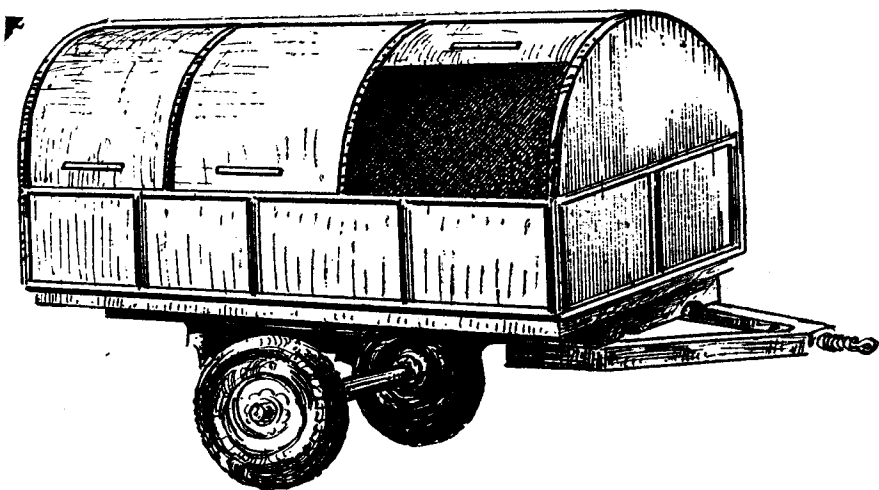
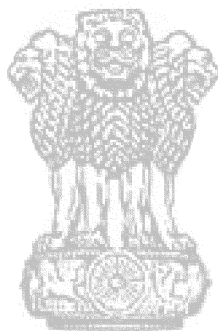


Fig. 37



सत्यमेव जयते

(*Ordinary Size*).

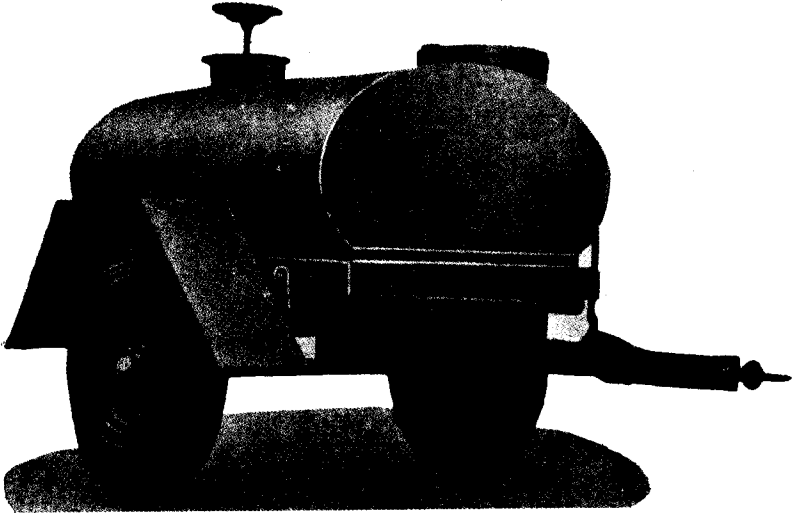
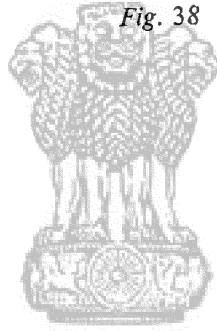


Fig. 38



सत्यमेव जयते



Fig. 39



सत्यमेव जयते

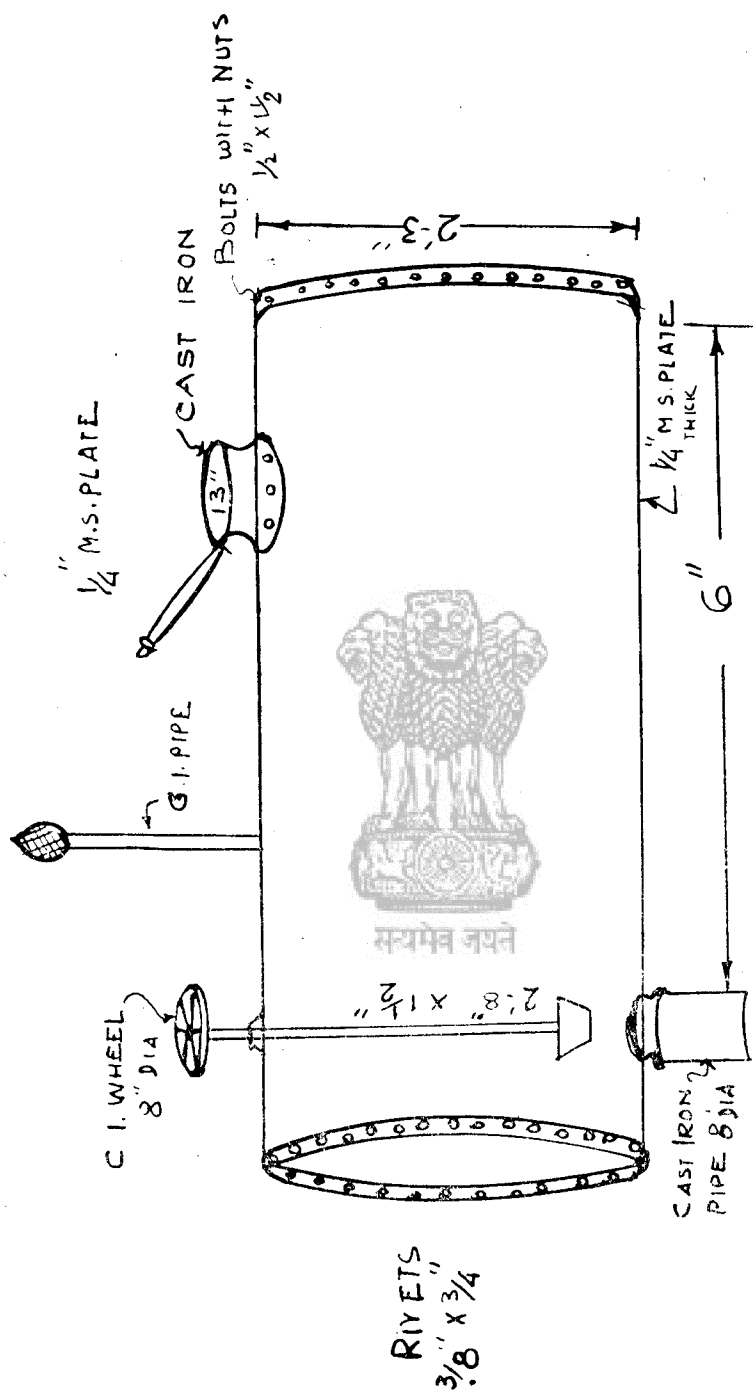
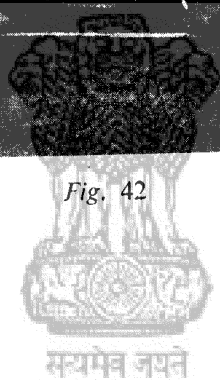


FIG. 40.

M, S. Plate $\frac{1}{4}"$, Thick, G. I. Pipe $1" \times 21$ ft. ; C. Iron, Inlet + Outlet ; Bolts with nuts $\frac{1}{2}" \times 1\frac{1}{2}"$; Rivets $\frac{3}{8}" \times \frac{3}{4}"$; Shaft $2'8" \times 1\frac{1}{2}"$



Fig. 42



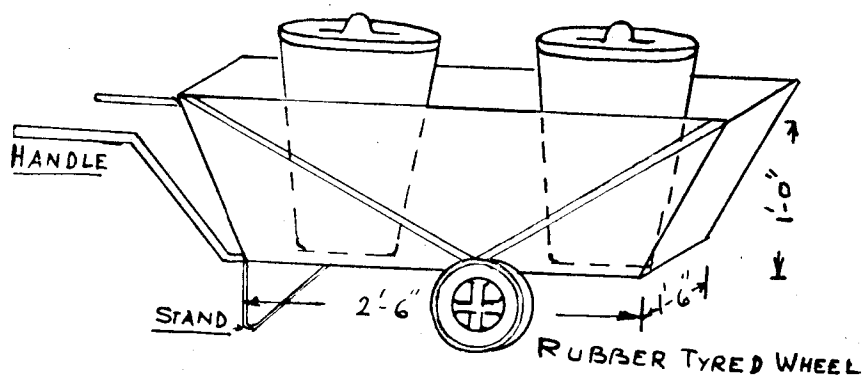
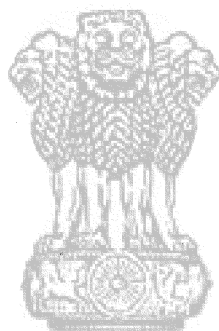


Fig. 43



सत्यमेव जयते

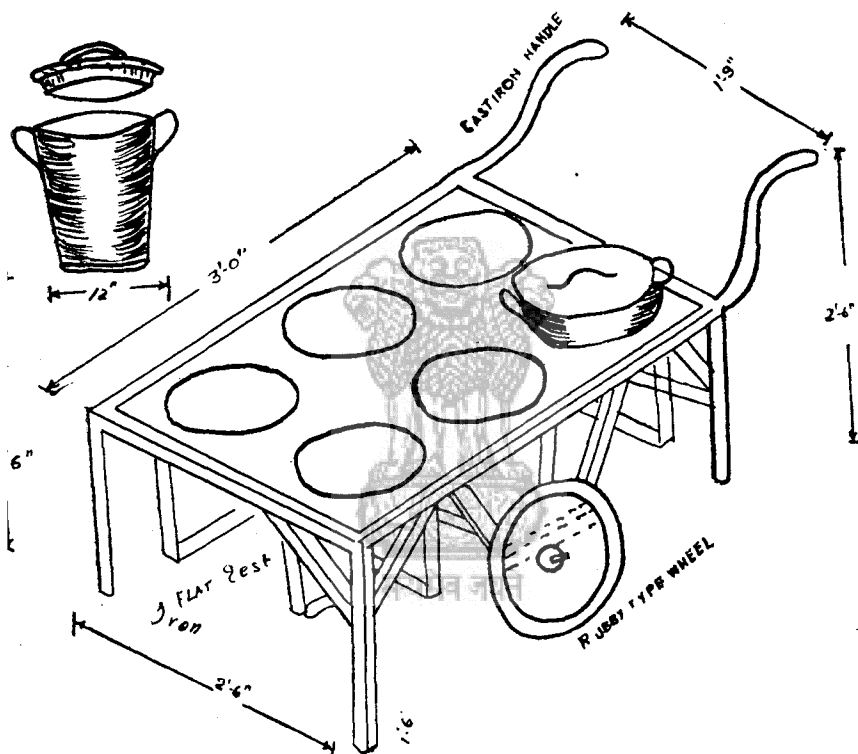


Fig. 44

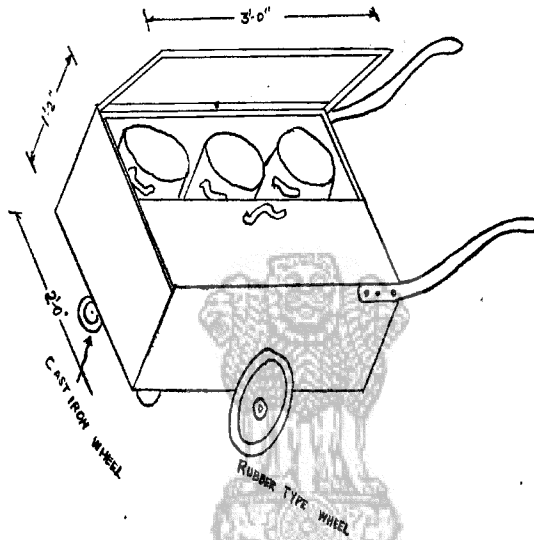
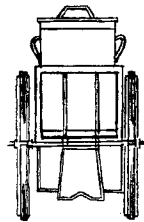
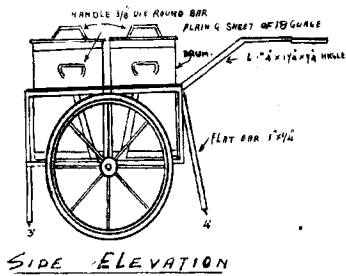
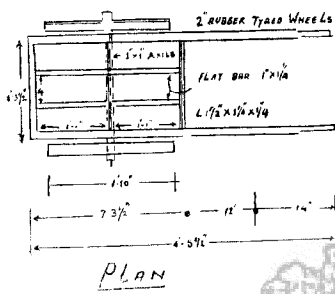


Fig. 45

सत्यमेव जयते



FRONT ELEVATION



DIEMENSION OF DRUM 6 x 11 1/2 (INCH)

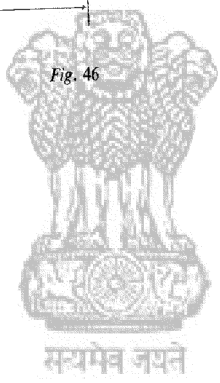


Fig. 46

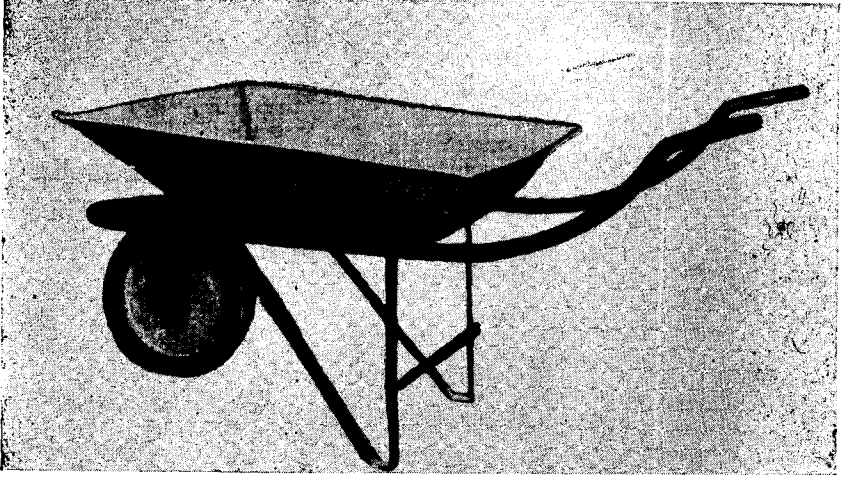
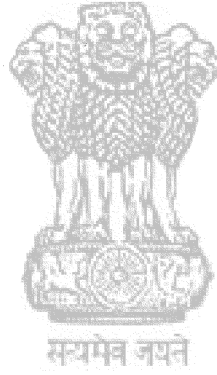
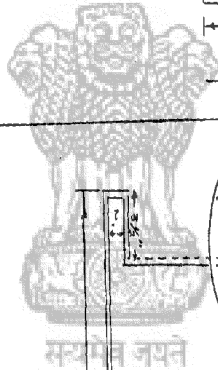


Fig. 47





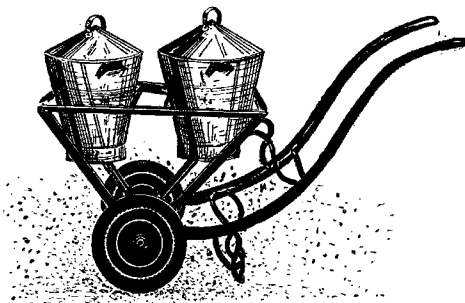


Fig. 49

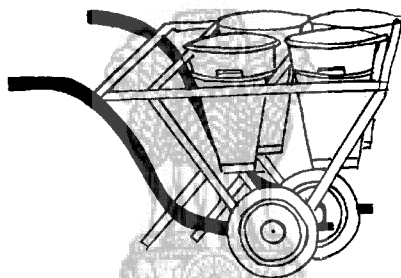


Fig. 50

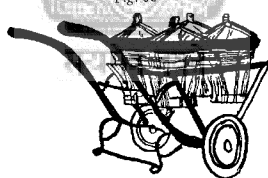


Fig. 51



Fig. 52

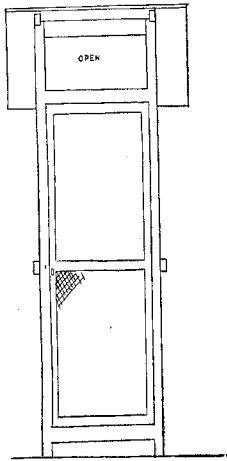


Fig. 53

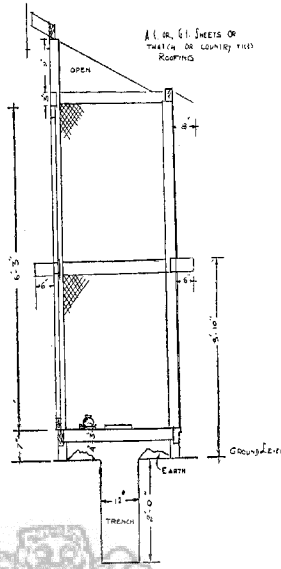


Fig. 54

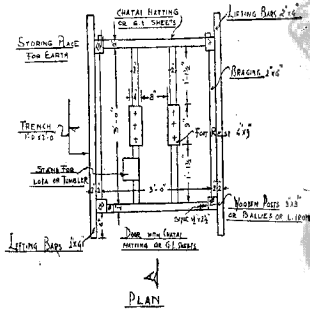
सत्यमेव जयते



ELEVATION



SECTION A-A

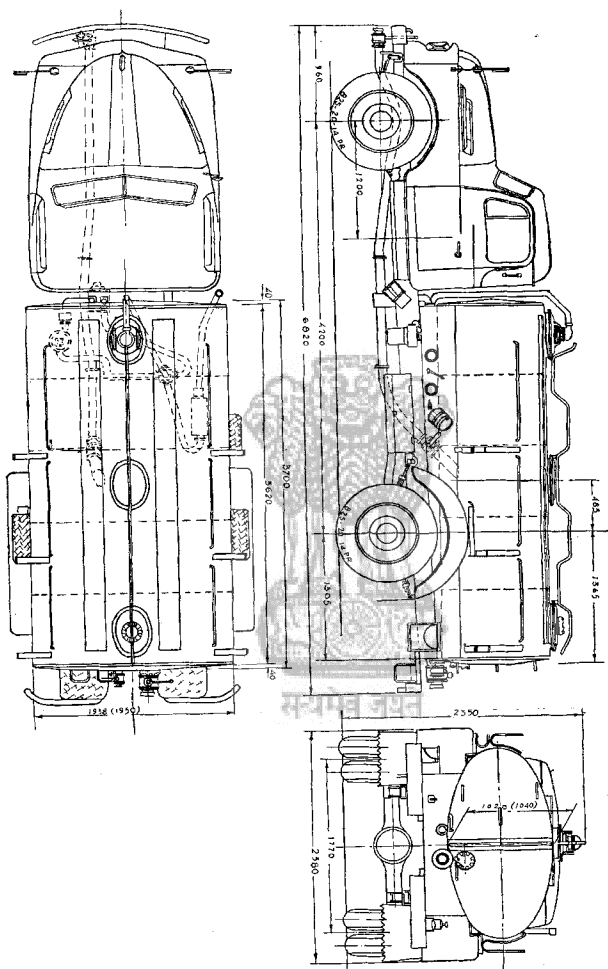


PLAN

NOTE
THE LATRINE MAY BE USED BY PUTTING IT OVER A TRENCH ABOUT 12" WIDE AND 2'-6" DEEP. AFTER USE, THE USER MAY COVER THE NIGHT SOIL WITH EARTH. WHEN THE LATRINE HAS BEEN USED AND COVERED INSIDE THE LATRINE, THE LATRINE CAN BE SHIFTED FURTHER. WHEN A PORTION UNDER SEAT HAS BEEN FILLED UP, HANDFULS OF NIGHT SOIL MAY BE REMOVED AFTER FISH MOUNTING AND CAN BE USED IN FIELDS.

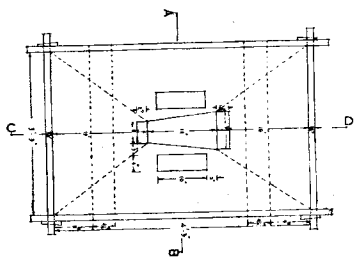
Design of a Trench Latrine (Portable) Scale 1"=4 Feet.

सत्यमेव जयते

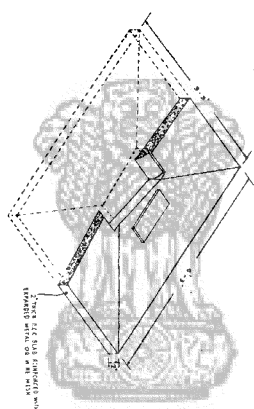


DRAWING No.A/9.1

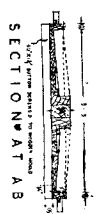
MOULD FOR SLAB OF WATER SEAL PIT LATRINE



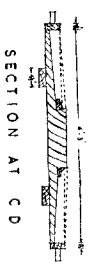
PLAN



ISOMETRIC VIEW OF SLAB



SECTION AT A B



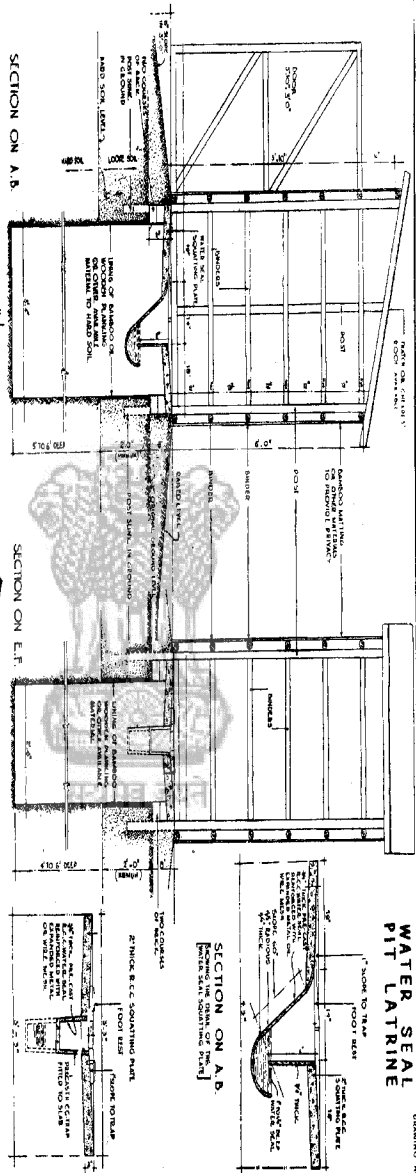
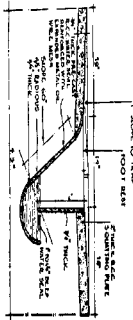
SECTION AT C D

DRAWN BY S. P. DHANU
APPROVED BY D.G.H.S.
DATE 15.2.55

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NEW DELHI

WATER SEAL PIT LATRINE

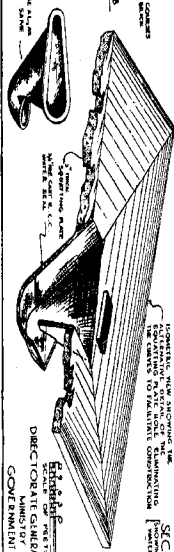
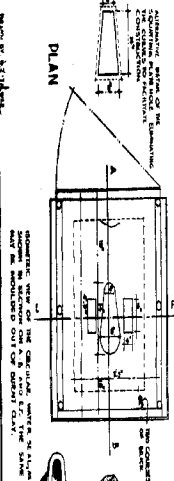
DRAWING NO. 5



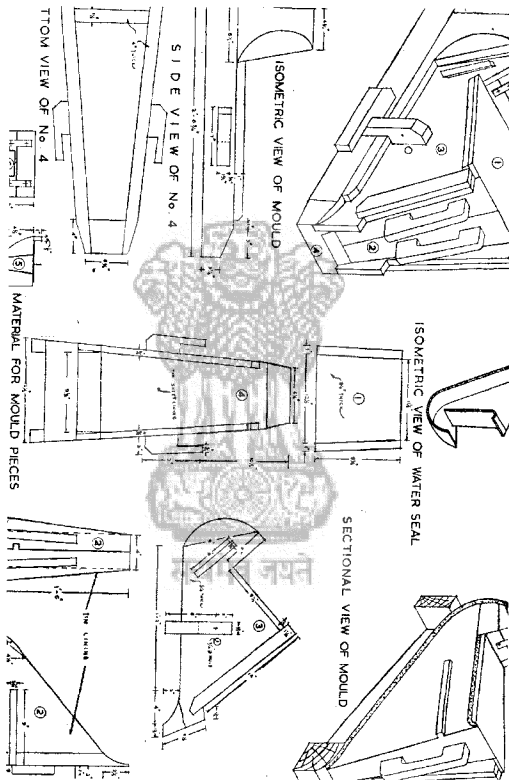
SECTION ON E.F.

SECTION ON F.F.

PLAN

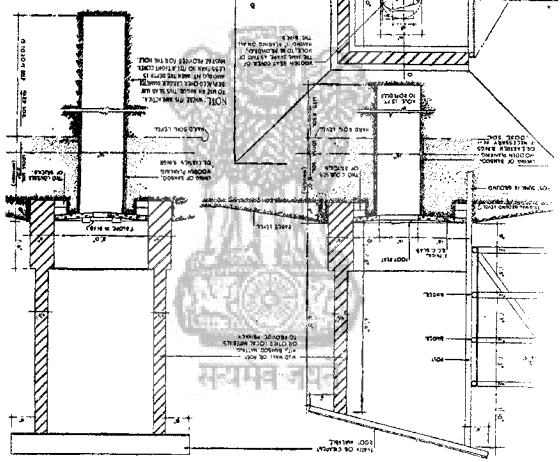


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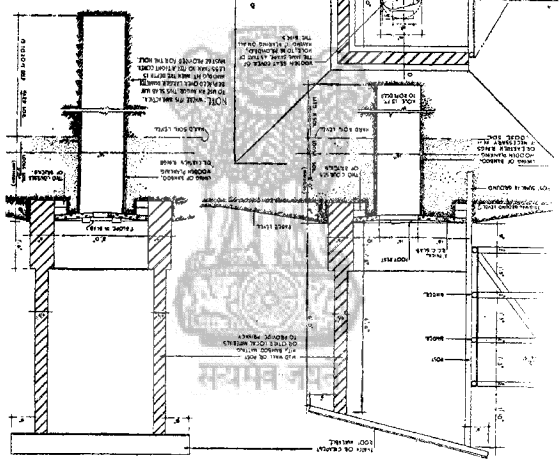
SIMPLE BORE HOLE LATRINE



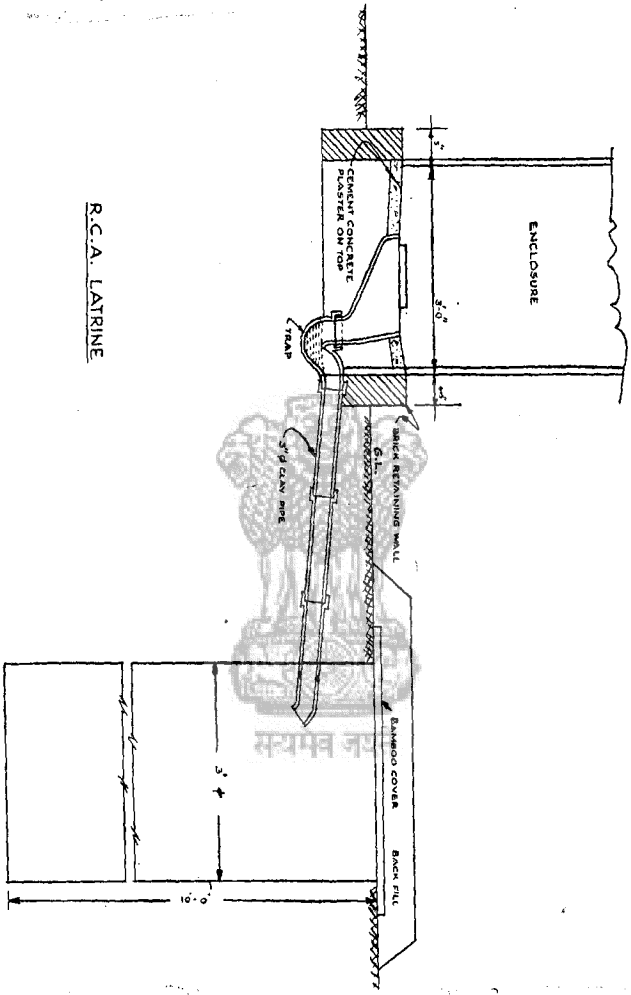
SECTION ON A-A
SECTION ON B-B

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SIMPLE BORE HOLE LATRINE



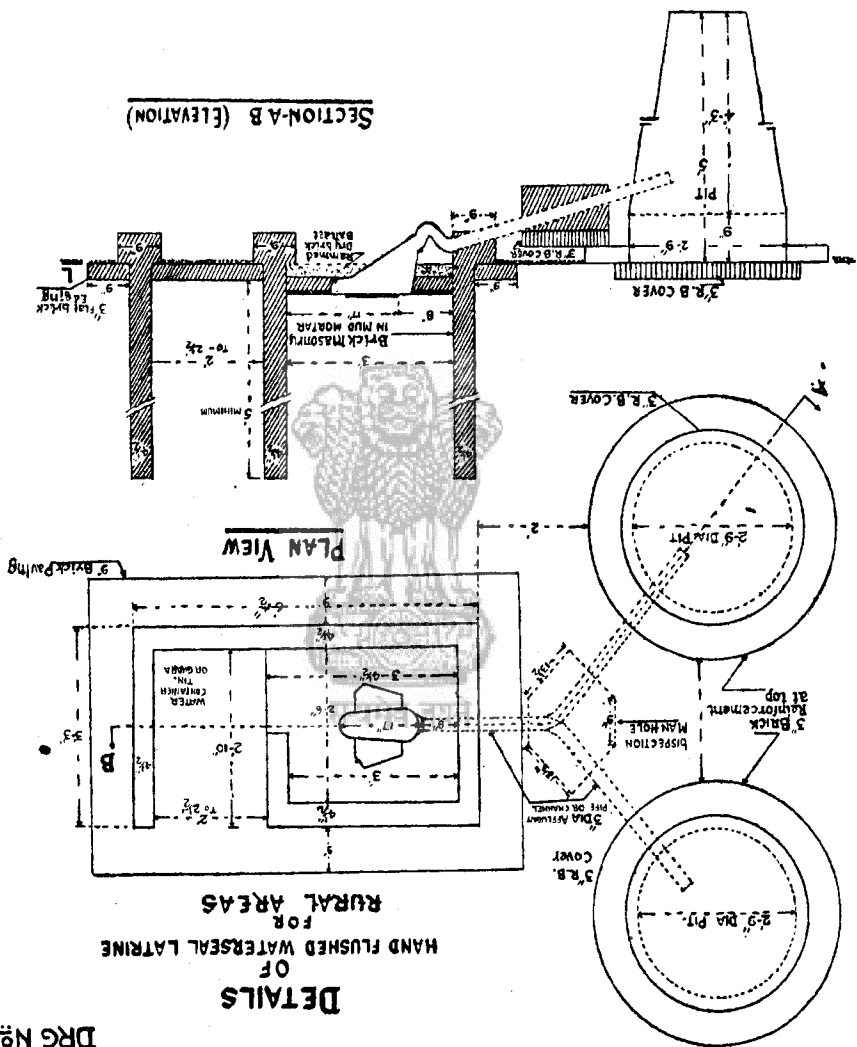
SECTION ON A-A
SECTION ON B-B



R.C.A. LATRINE

DRG N° 4

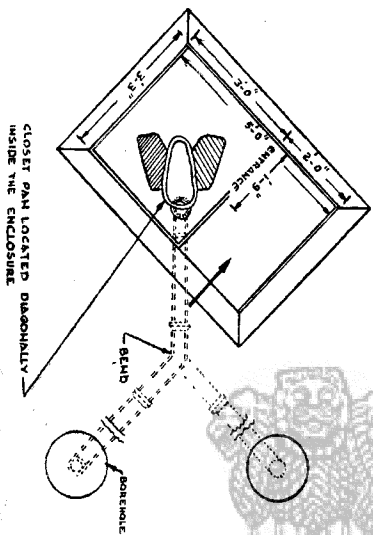
DETAILS
OF
HAND FLUSHED WATERSEAL LATRINE
FOR
RURAL AREAS



ALTERNATE DESIGNS OF A WATER CLOSET
CONNECTED TO A BOREHOLE

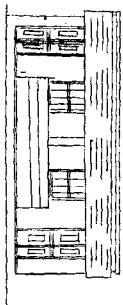
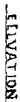
DRG. NO. VI

NOTE:- A BEND CAN BE USED FOR CHANGING
THE CONNECTION TO THE BOREHOLE. THE JOINTS IN THE
CONNECTING PIPES CAN BE MADE WITH CLAY, SO THAT
THEY CAN BE EASILY TAKEN OUT TO FACILITATE
EFFECTING A CHANGE IN THE DIRECTION OF FLOW.



सत्यमेव जयते

SCALE 8'-1"



Sd/- **LECTURER.**
ASST ENGINEER.
Vc. L.I.G. HOUSE SCHEME
CITY ENGINEER.
MAGPURA CORPORATION.
Sd/- **LECTURER.**

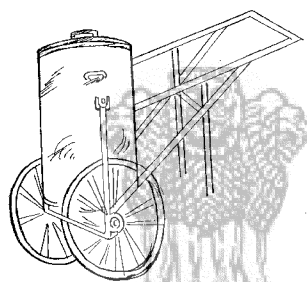
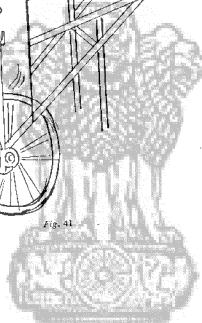


Fig. 41



सत्यमेव जयते